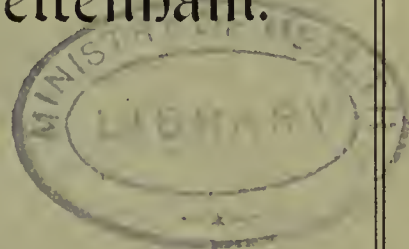


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Cheltenham.



# REPORT

OF THE

# Sanitary Condition

ETC., ETC., OF THE

BOROUGH OF CHELTENHAM,

FOR THE YEAR 1925

(being a quinquennial Survey Report)

BY

J. H. GARRETT, M.D., D.P.H.,

MEDICAL OFFICER OF HEALTH.

Together with the Report of the Chief Sanitary Inspector

by A. E. HUDSON, M.B.E.,

WITH APPENDIX OF

Meteorological Summaries by the Meteorologist—

JOHN ORGEE, LT.-COMMANDER R.N.

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“Salus Populi Suprema Lex.”

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PRINTED BY ORDER OF THE SANITARY AUTHORITY.

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CHELTENHAM:

G. F. POOLE, PHENIX PRESS, BENNINGTON STREET,



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## BOROUGH OF CHELTENHAM.

---

*Members of the Sanitary Authority, or Town Council,  
of the Borough of Cheltenham.*

THE MAYOR (W. J. M. DICKS, ESQ.)

ALDERMEN J. D. BENDALL, C. H. MARGRETT, C.B.E., J.P., C.A.,  
(Deputy Mayor), R. STEEL, J.P., J. STEWART, P. P. TAYLOR,  
CLARA F. WINTERBOTHAM, M.B.E., J.P.

COUNCILLORS F. H. BASTIN, J. G. CAVENAGH-MAINWARING (Major),  
G. O. W. DUNN, O.B.E., W. D. FARRAR, L. JAMES, A. MANN,  
H. MILLER, J. MOORE, J. P. PATES, A. S. F. PRUEN,  
W. SAWYER, H. M. THOMAS (Brig.-Gen.), C.M.G., D.S.O.,  
H. W. THOMAS, J. H. TRYE (Capt. R.N.), C.B.E., W. WELSTEAD,  
T. E. WHITAKER, H. T. YARNOLD.

*Of the above the following form the Public Health  
Committee :—*

MR. COUNCILLOR PRUEN (Chairman).

ALDERMEN C. H. MARGRETT, R. STEEL, J. STEWART,  
C. F. WINTERBOTHAM.

COUNCILLORS W. J. M. DICKS, W. D. FARRAR, L. JAMES, J. MOORE,  
H. M. THOMAS, W. WELSTEAD, T. E. WHITAKER, H. T. YARNOLD.

*To the Mayor and Members of the Sanitary Authority  
of the Borough of Cheltenham.*



YOUR WORSHIP AND GENTLEMEN,

I beg to present my Public Health Report for the year 1925.

A few years ago the Ministry of Health, at whose order the Annual Report of the Medical Officer of Health is made, determined that there should be a report of two kinds, an ordinary report each year for four years, followed each fifth year by a survey report. The report of this year is a quinquennial or survey report. The form of the report is prescribed by the Ministry of Health, which issued a circular of instructions, with stated headings, under which the report is to be written. The object, no doubt, is to ensure a uniformity in the reports coming from various parts of the country, to admit of comparison.

This report, therefore, contains the usual items of each annual ordinary report, to maintain the same sort of information in sequence with the others, together with a summary of the statistics and chief happenings in the Public Health Work of Cheltenham during the last five years. That this report may be of further use hereafter as a matter of reference, and also because it is of greatest interest to review the health statistics through as long a period as is convenient, I have worked out the chief statistics anew for the past 30 years, and as the statements made at the time of issue in each annual report, through the prolonged period, were in considerable degree erroneous, because based upon an estimated growth of population which, as a matter-of-fact, did not take place, I have recalculated the annual rates anew for every year of the 30, according to the population as indicated by the census returns that have been published through the period, and these statistical results may therefore be taken as much more nearly correct.

Public Health Work in modern times has been largely added to by the introduction of what is known as the Social Services, such as the work connected with Tuberculosis and Venereal diseases, Maternity and Child Welfare, and public provision of houses. The School Medical Work is an extensive and important adjunct of this nature, but finds no more than a mere mention in this report, as I make an annual report upon it to the Education Committee.

I have the honour to be Mr. Mayor and Gentlemen,

Your obedient Servant,

June 14th, 1925.

J. H. GARRETT.

## CONTENTS.

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	PAGE
Members of the Sanitary Authority of the Borough of Cheltenham and of the Public Health Committee .. .. .	2
Address to the Sanitary Authority .. .. .	3
<b>Natural and Social Conditions of the Area:—</b>	
Population .. .. .	6
Character of the Populace as judged by the Houses—Poverty .. .. .	7
<b>General Provisions of Health Services in the Cheltenham Town Area:—</b>	
Medical Work, Hospitals, Clinics and Resident Institutions .. .. .	9
School Medical Work, etc. .. .. .	10
Maternity and Child Welfare Work .. .. .	10
Ambulances .. .. .	10
Mortuary and Post Mortem Examinations .. .. .	10
Chemical and Bacteriological Work .. .. .	11
<b>Public Health Officers of the Local Authority .. .. .</b>	<b>11</b>
<b>Public Health Legislation in force in the Borough of Cheltenham .. .. .</b>	<b>12</b>
<b>Vital Statistics:—</b>	
General Summary for 1925 .. .. .	12
Sickness during 1925 .. .. .	13
Notifiable Diseases 1925 .. .. .	14
Tuberculosis—New Cases and Mortality 1925 .. .. .	14
<b>Sanitary Circumstances of the Area:—</b>	
Water .. .. .	15
Drainage and Sewerage .. .. .	15
Closet Accommodation .. .. .	16
Scavenging .. .. .	16
<b>Prevalence and Control over Infectious Diseases— 5 years Survey:—</b>	
Notifiable Diseases notified during the 5 years .. .. .	17
Notes upon especially interesting outbreaks of Infectious Sickness, 1921—1925 .. .. .	17
Small Pox .. .. .	17
Enteric or Typhoid Fever .. .. .	19
Paratyphoid Fever .. .. .	19
Scarlet Fever .. .. .	22
Diphtheria .. .. .	22
Measles .. .. .	24
Tuberculosis .. .. .	25
Notification received in Cheltenham, 1911—1921 inclusive .. .. .	25
Other Diseases .. .. .	25



	PAGE
Table giving Causes of Death in the Borough of Cheltenham as given by the Registrar-General for each of the 5 years 1921—1925 inclusive ..	26
Table of Zymotic Diseases Notified in Cheltenham since Notification began	27
Table showing leading Health Statistics in Cheltenham during the last 30 years based upon population as corrected by census returns ..	27
Diagram showing movements in Birth and Death-Rates, Death-Rates from certain causes, and Infant Death-Rate during 30 years ..	27
<b>Housing in Cheltenham</b> .. .. .	28
Provision of New Houses under Corporation Schemes, to date ..	30
<b>Inspection and Supervision of Food:—</b>	
Milk Supply .. .. .	31
Summary of Analytical Work under Sale of Food and Drugs Act for 5 years	33
<b>Maternity and Child Welfare</b> .. .. .	34
Deaths from Puerperal Conditions in 5 years, 1921—1925 ..	35
Ophthalmia Neonatorum do do. do. ..	36
Annual Report of Health Visitors for 1925 ..	36
Attendances of Infants & Toddlers at Centres of Voluntary Health Society in four quarters of year 1925—26 ..	37
Annual Report of Voluntary Health Society for the year 1925—26 ..	38—40
<b>Sanitary Inspection of Area:—</b>	
Report of Chief Sanitary Inspector .. .. .	41
Sanitary Inspections in district in 5 years, 1921—1925 ..	42
House to House Inspections .. .. .	44
Housing. Statement as required by Ministry of Health ..	46
House Drainage .. .. .	47
The Corporation Sanitary Certificate—Sanitary Certificates Granted in years 1921—1925 .. .. .	48—50
The Administration of the Factories and Workshops Act, as required by the Ministry of Health .. .. .	51
<b>Meat Inspection</b> .. .. .	53
Number of diseased carcasses seized and surrendered ..	54
Other unsound food material surrendered ..	54
Table showing animal carcasses inspected in 5 years 1921—25 ..	55
Management of Abattoir .. .. .	55
Tabular Statement of Number of private slaughter-houses in use in 1925 and previously .. .. .	55
Public Health (Meat) Regulations, 1924 .. .. .	56—58
Inspections of Food Shops, Dairies, Cowsheds and Milkshops ..	58
Rat Destruction .. .. .	59
Houses Let in Lodgings .. .. .	60
Common Lodging Houses .. .. .	61
Offensive Trades .. .. .	61
Sanitary Conditions of Places of Entertainment .. .. .	61
Increase of Rent and Mortgage Interest (Restrictions) Act 1923 ..	61
Appendix .. .. .	63
<b>Meteorological Summaries for Cheltenham:—</b>	
Reported by Lt.-Commander Orgee, Borough Meteorologist ..	64—68

## NATURAL AND SOCIAL CONDITIONS OF THE AREA.

---

### Physical Features and General Character.

CHELTENHAM lies in the West-central portion of England being surrounded for a great distance by a beautiful rural area devoted almost exclusively to agriculture. The town partakes largely of the nature of this surrounding country, being broadly laid out, its streets adorned with avenues of fine trees and many public and private parks and gardens. It occupies the rising ground that passes within two or three miles, East and Southward, to the steep slopes of the Cotswold Hills, some of whose highest summits rising to about 1,000 feet above sea level, immediately overlook the town. This faces a broad valley, namely, that of the river Severn, which flows at a nearest distance of about seven miles. Though near the hills Cheltenham is not itself hilly, the gradients of its streets, where gradients occur, being gentle.

It is drained by three brooks passing through and by it from the hills towards the greater river, the middle one of the three bearing the name of the Chelt. The sewerage of the town is thus facilitated, the main sewers being able to follow the courses of the brooks, and the greater branches being easily led into these.

The main geological features of the ground occupied by the town are those of the Lias system, the clay of which laps up the slope of the Cotswolds behind the houses to a considerable altitude. In the town area, depressions in this clay are filled with a sharp sand, that lies to varying depths, and makes a porous subsoil upon which more than half the houses of the town are built, the rest standing upon the clay itself.

The climatic influences are those of the West of England, the rainfall being moderate, the annual average being represented by about 27 inches.

The humidity is perhaps added to here and there by the tree growth, which also lessens the movement of air currents to some extent, but the general effect though softer and moister than further East can hardly be called relaxing.

### Population.

The population has shown remarkably little variation in number during the past 30 years. Apart from the incidence of the war, which temporarily depleted the population by the call for war-service, a mean population of 49,000 may be taken and the annual variation in the 30 year period does not appear to have been more than 700 on either side of that number. The expectancy of increase between the census periods, having been chiefly based upon the known increase in the number of inhabited houses, was in each case destined to be falsified by the actual census count, which gave a lower number than anticipated, the chief and evident cause lying in the lessening of the average number constituting the separate private family. In this number there has been a continued fairly regular and well marked decadence at each of the last three census enumerations, the fall being as follows:—



<i>Census Year.</i>	<i>1891.</i>	<i>1901.</i>	<i>1911.</i>	<i>1921.</i>
No. of persons per separate family ...	...	4.50	4.31	4.08
" " " " dwelling ...	4.90	4.77	...	4.43

The fall in the birth-rate during this same period has been the predominating cause of this decrease in the numbers per family, lessening the number of children forming the family, and this has almost exactly neutralized any natural increase due to the smaller number of deaths than births that could be observed in our statistics, together with any difference that may have been due to emigration and immigration from and into the town. Recently however, the natural increase has been lost by the number of deaths approximating to the number of births, and even surpassing it, and this together with the continued fall of the birth-rate must have an effect upon the next census count, and prevent the increase in the whole population that the considerable provision of new houses ought otherwise to have secured.

The quality of the population is peculiar as compared to the whole population of the country in its age and sex distribution, which vary so much from the normal as to have an important effect upon the death-rate from all, and some particular, causes. The average life expectancy is lowered by the fact of there being so large a number of immigrants of an advanced age coming here to settle. The relative number of females to males in the population being also very high as compared with most other districts.

### **Character of the Populace as judged by the Houses — Poverty.**

Though the most apparent characteristics of Cheltenham are those of a residential place for a superior and favoured class, the more populous wards possess many very poor streets, whose houses are too small to be truly hygienic, and these are occupied by a populace amongst which are many very poor families, a good many below the border line of indigence, and the greater part in receipt of earnings not averaging much over £2 per week at this time.

In a report for a year prior to the war I gave the following table of the gross values of the houses constituting the Borough at that period. I reprint this on account of the interesting information it gives of the relative number of poor and better houses, in the whole town and its several parts.

#### **Gross annual value of Houses constituting the Borough of Cheltenham.**

	<i>under £15.</i>	<i>£15—£25.</i>	<i>£25—£50.</i>	<i>£50 and upwards.</i>
North Ward ...	1907	141	106	19
South Ward ...	960	387	375	184
East Ward ...	1129	215	265	167
West Ward ...	582	262	277	390
Central Ward ...	861	241	343	205
Middle Ward ...	794	278	345	631
Whole Town ...	6233	1524	1711	1596

The changes that have come to pass since the above table was drawn up have not affected the relative values of the houses to such a material extent as to render invalid the comparison it offers. At that time there were 11,064 houses, and at the census of 1921 there were 10,928 houses. In the four years since 1921 about 400 houses have been added and 100 gone out of existence. The annual values of the houses since 20 years ago have increased much more in the better than in the worst houses, and, generally, the rateable values have only averaged an increase of 10%. The comparison as to the number of houses at the different relative values therefore continues much the same, there being very little difference in the actual value of those of lowest order, whose number is so much in excess of the rest.

There has been a want of some regular and sound industrial employment in Cheltenham, partly supplied by recent development of several minor industries, but still effective in making this town a poor one for lucrative manual work for the inhabitants of more than half the houses of the Town. A good many people are employed in casual part-time labour such as gardening, and domestic work, and there is a tendency for agricultural labourers, whether in or out of work, to come into the town to live whenever they have been able to find a lodging. These aid in forming the comparatively large poor-class part of our populace.

The expenditure in relief of poverty by the Poor Law Authority has increased here as elsewhere since the great war. This difference in expenditure must be chiefly accounted for by the decrease in the purchasing value of money, and though there may be some remaining excess of poverty resulting from the effects of the war, the means of living of the mass of the people here have been heightened, not only by increase of wages, but by the liberal provisions for sickness and old age, and other social aids that have been adopted.

By the courtesy of the Clerk to the Board of Guardians I am able to give the following interesting comparison between the Poor Law Expenditures in 1914 and 1925.

		Outcase relief.		In-door maintenance including children.		For Lunatics (to County Council).
1914	...	£4051	...	£5275	...	£5244
1925	...	£6555	...	£6288	...	£10973

The more than 100% increase in cost of maintaining lunatics is not caused by increase in numbers, but in expense, and the increases under other headings fortunately do not mean more cases; as a matter of fact there were fewer in 1925 than prior to the war.

The working class as a whole is further removed from indigence than formerly, with a corresponding betterment in the conditions of health—a happy effect, which is also added to by the greater temperance now to be observed as compared with the drinking habits of the generation immediately past.

## GENERAL PROVISIONS OF HEALTH SERVICES IN THE CHELTENHAM TOWN AREA.

---

### Medical Work— Hospitals, Clinics and Resident Institutions.

The Medical Insurance is brought into constant extensive use here, there being about 20 medical practitioners with panels, and one Friendly Society's doctor giving his whole time to this class of work.

The Poor Law Authority has its Institution with extensive Infirmary accommodation including lying-in wards, and the usual provision by appointment of medical officers for outdoor medical relief.

The well equipped Cheltenham General Hospital gives a full service to the town for in-patients, and by out-clinics, including those specially arranged for venereal diseases by the County Authority, whose tuberculosis clinic is also accommodated upon its premises. Recently a system of payment by subscription giving a right of treatment in this hospital, or as out-patients, has been arranged for the working-classes and appears to be answering satisfactorily.

The Eye, Ear and Throat Hospital is now managed conjointly with the General Hospital by aid of a specialist staff, and this branch is doing the operative work needed upon the throat, eyes, etc., of school children by arrangement with the Education Committee.

The Cheltenham Children's Hospital provides an accommodation of about 40 beds for children, suffering from ailments that are chiefly of a chronic class, the General Hospital dealing with children suffering from more acute diseases, and those especially, in which the larger operative measures are required. There is a clinic at the General Hospital for the crippled and deformed, the subject being made a speciality by one of its surgeons.

The Delancey Fever Hospital supplies good accommodation for isolation of infectious diseases, including Small Pox, the latter by a new hospital situated in a remote rural position.

The County Council provide for sanatorium, and hospital treatment, and outdoor and domiciliary treatment of cases of tuberculosis, by special residential institutions, and out-patient clinic or dispensary, etc. There are chief and assistant tuberculosis doctors appointed by the County devoting whole time to this speciality. The same Authority arrange the provision of treatment of venereal disease at the General Hospital.

Mental diseases are provided for by the County Institution, and a large private mental hospital, both situated near Gloucester. An experienced specialist in this town also receives patients at his house by private arrangement, the management being under governmental regulations.

The Cheltenham District Nursing Association provide for professional nursing in the homes of the poor, chiefly by daily visits, and this same body supplies qualified midwives for attendance on poor women, who actually attend nearly three-quarters of all the lying-in cases that occur in the town. It also provides at its centre—The Victoria Home—lying-in wards for a small number of in-patients, and it is proposed to extend this accommodation to the dimension of a lying in hospital.

There are separate residential institutions in Cheltenham for the reception of the blind, for orphans, and for friendless girls.

### **School Medical Work, etc.**

There is a General Minor Clinic for school children situated in a central position, at the Municipal Offices, most excellently designed and numerous attended. This is combined with a dental clinic and cleansing station.

There are two school nurses engaged with the school doctor in School Medical Work. A special additional nurse has been engaged whenever an epidemic has arisen that seemed to require her service. There are nurses provided by the County Authority for visiting cases of tuberculosis, and similar provision by the Board of Guardians for visiting boarded-out children.

### **Maternity and Child Welfare Work.**

There are three Maternity and Child Welfare Centres carried on by a Voluntary Society, with two Medical Attendants appointed by the Society assisted by two Health Visitors appointed by the Town Council, and an active Home Visitation by the latter with a connected gratuitous milk supply for necessitous cases, supervised by the Medical Officer of Health. There are antenatal addresses to expectant mothers carried out at the Victoria Home by one of the medical staff by arrangement with the Town Council, who also acts as consultant for extraordinary conditions connected with obstetrics.

There are 24 practising midwives in the town, all trained, and supervised by the County Authority. In 1925 they attended 479 cases to which it was necessary to summon medical aid in 117, and there were no maternal deaths.

### **Ambulances.**

There are sufficient ambulance facilities both for infectious cases required to be taken to the Isolation Hospital, and for cases required to be conveyed to the General Hospital. There are also special conveyances for use in connection with the steam disinfecter.

### **Mortuary and Post Mortem Examinations.**

There is a public mortuary, and provision for post-mortem examinations, the latter being now conveniently done at the General Hospital by an appointed pathologist.



## Chemical and Bacteriological Work.

There are arrangements for chemical analytical work under the Foods and Drugs (Adulteration) Acts which are carried out by the County Analyst, and Water Analyses of the Town Supply are made by the Medical Officer of Health, with occasional assistance.

Bacteriological work is arranged for as a part of the County provision. It was formerly all done at the Pathological Laboratories of the Bristol University, but henceforward, for the main part, is to be conducted at the Cheltenham General Hospital, from which institution the necessary collecting tubes and bottles are distributed for the microscopic examination of tuberculosis sputum and swabs from diphtheritic throats, etc.

Vaccination as a protection against Small Pox remains to this date the work of the Poor Law Authority, which appoints a Public Vaccinator to perform gratuitous vaccinations. In case of urgent need, as upon outbreak of Small Pox, special additional vaccinators have been appointed temporarily.

## PUBLIC HEALTH OFFICERS OF THE LOCAL AUTHORITY.

---

Medical Officer of Health—J. H. GARRETT, M.D., D.P.H.

Assistant Medical Officer of Health and School Doctor—

I. J. McDONOUGH, L.R.C.P. and S., D.P.H.

Chief Sanitary Inspector—A. E. HUDSON, M.B.E., F.S.I.A.

Assistant Sanitary Inspectors—

C. W. CLIFFORD, F. R. JEFFORD, F. KEENE and W. TOWNSEND.

Three of these have Meat Inspector's Certificates as well as Sanitary Inspector's Certificates. Mr. Townsend is specially employed in disinfection.

School Nurses—MISS EFFIE HAY, MISS FRANCES HODGSON.

Health Visitors—MISS HELEN JORDAN, MISS E. NICHOLLS.

Clerks—MISS B. A. RICHARDS (Health Department),

MISS M. HARVEY (School Medical and Child Welfare  
Department).

The Borough Surveyor and Water Engineer—

J. S. PICKERING, ESQ., M.I.C.E.

He is responsible for the refuse disposal, the management of sewers and sewage disposal works, the condition of streets and public buildings, and the Water Supply, etc.

The Town Clerk—R. OWEN SEACOME, ESQ.

He conducts all prosecutions rendered necessary upon failure to comply with legal sanitary requirements, and writes admonitory letters to owners who have failed to carry out legal notices; also signs notices on behalf of the Town Council, and does other clerical work connected with Public Health matters, and advises upon all legal points.



## PUBLIC HEALTH LEGISLATION IN FORCE IN THE BOROUGH OF CHELTENHAM.

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All the Public Health Acts of General Application.

Adoptive Acts : Infectious Diseases Prevention Act 1890.

Housing of Working Classes Acts Part III 1890

Public Health Acts Amendment Act 1890 Part V.

Public Health Acts Amendment Act 1907 Part II (Sections 16, 17, 19, 21, 22, 24, 27, 28, 29, 30, 32, 33) Part III (Sections 34-38, 44, 50, 51) Part IV (Sections 53, 55-58, 63-65, 67, 68) Part V (Section 69-75) Part VI (Sections 85, 86) Part VII (Sections 78, 79, 81) Part VIII (Sections 87, 89) Part IX (Section 91)

Public Health Act 1925 Part II (Sections 13-15, 17-19, 21-23, 35) Part III (Section 36-44) Part IV (Sections 45-50) Part V (Sections 51-55).

Bath and Washhouses Acts 1886.

Cheltenham Improvement Act 1852.

" " " 1889.

Sets of Byelaws for the following purposes—

Keeping of Animals.

Offensive Trades.

Common Lodging Houses.

Houses-let-in-Lodgings.

Private and Public Slaughterhouses.

Noisy Animals.

Prevention of Fouling of Footway by Dogs.

Regulations under Cowsheds, Dairies and Milk Shops Orders.

Public Health (Meat Regulations 1924)

## VITAL STATISTICS.

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### General Summary for 1925.

Area of Municipal Borough 4,726 Acres.

Rateable Value Buildings £336,250, Agricultural Land £7,676.

Sum Represented by a Penny Rate £1,355.

Number of Inhabited Houses 1921, 10,928.

Number of Families or Separate Occupiers 11,862.

Population 1921 (census) 48,430, 1925 (Registrar General) 48,770.

Birth-Rate 1925 14·3 per 1,000 of population.

Death-Rate 1925 (crude) 15·1 per 1,000 of population.

" 1925 (corrected) 11·4 per 1,000 of population.

Zymotic Disease Death-Rate (7 chief Zymotics) 1925 1·16.

Pulmonary Tuberculosis Death-Rate 1925 1·01.

Infant Death-Rate (under 1 year old) 1925, 68 per 1,000 children born.

Registrar General's factor for reducing our crude death-rate to a correct comparative rate ·755.

## Sickness during 1925.

The year 1925 was the most favourable year in connection with notifiable infectious diseases ever experienced in Cheltenham since notification was first required. Apart from Chicken-pox which we continued to notify as a safeguard against the possible invasion of Small-pox, and of which there was a prevalence for a time that was mild both in regard to numbers and type of the disease, other notifiable diseases were in each instance below the average. Scarlet Fever dropped to a total of 26 cases compared to the hundreds of cases that occurred during many separate years in past time. The falling-off in late years in the numbers of cases of this disease, as well as the continued mildness of the type of cases that have latterly occurred is a matter specially worth remark, although to state exactly what this is to be attributed to is impossible.

The decadence of Scarlet Fever was more or less synchronous with the effects of the great war, though in what way that can have exerted any influence it is impossible to say, unless, in conjunction with other noticeable improvements in public health that have taken place in the same time, it has been affected by the improved means of subsistence, and better feeding of the poorest poor, combined with the greater temperance in the consumption of alcoholic drinks, though for the main part so far as Scarlet Fever is concerned, the latter effect must have been indirect since it is chiefly children who suffer attacks of Scarlet Fever.

The 42 cases of Diphtheria that were notified in the year were below the average number, and the fact of there being but one death is eloquent in proving the mild nature of the attacks.

We were just touched by those two diseases of uncertain origin and extraordinary method of spread—Encephalitis lethargica and Poliomyelitis there being two cases of the former and one of the latter, and neither fatal.

The 5 cases of Typhoid Fever notified, included two sisters, who were sent, sometime after the illness had begun, into our General Hospital from a district 20 miles outside our town boundary, where the disease undoubtedly originated. Two other cases occurred in a school house, reported at the time to be doubtful cases of paratyphoid and whose whole history seemed to deny the diagnosis. The fifth case was a case bacteriologically determined to be paratyphoid "B" though the temperature and symptoms only supervened upon a surgical operation in hospital. The whole five cases as affecting Cheltenham were therefore irregular and uncertain.

The 22 deaths directly due to Influenza proved the occurrence of a large number of cases, many of severe type though there were but 15 cases of Pneumonia notified during the year.

Cancer, as usual, caused a very high death-rate of 1·9 per 1,000 living. This comparatively high figure is chiefly the result of the unusually large number of elderly people in our population. Our general death-rate to be comparable with a town whose population is of normal or average age incidence requires to be diminished by about 25%, and the rate for Cancer requires as great a proportional reduction on account of our extraordinarily high average age incidence, though the required factor for a comparative expression of our Cancer death-rate has not been worked out.

## Notifiable Diseases Registered during 1925.

Disease.	No. of cases Notified.	No. of cases sent to Hospital.	Total Deaths.
Scarlet Fever ... ..	26	20	1
Diphtheria ... ..	42	35	1
Typhoid or Paratyphoid	5	4	—
Erysipelas ... ..	12	—	—
Encephalitis lethargica...	2	—	—
Ophthalmia Neonatorium..	1	—	—
Poliomyelitis ... ..	1	1	—
Puerperal Fever ... ..	1	—	—
Pneumonia ... ..	13	—	—
Chicken-pox ... ..	140	—	—

## Tuberculosis.

### New Cases and Mortality during 1925.

Age Periods.	New Cases Notified + 13 unnotified from Death Returns.				Deaths + Transfers.			
	Respiratory.		Non- Respiratory.		Respiratory.		Non- Respiratory.	
	M.	F.	M.	F.	M.	F.	M.	F.
Age unknown ... ..	—	5	—	—	—	—	—	—
0—1 years ... ..	—	—	—	—	—	—	—	—
1—5 „ ... ..	—	—	—	—	—	—	1	1
5—10 „ ... ..	—	2	—	—	—	—	—	—
10—15 „ ... ..	—	2	—	—	—	1	—	—
15—20 „ ... ..	3	6	—	—	4	5	—	2
20—25 „ ... ..	4	4	—	—	2	1	—	—
25—35 „ ... ..	8	11	—	1	5	6	1	1
35—45 „ ... ..	2	1	—	—	8	1	2	1
45—55 „ ... ..	5	3	—	—	4	5	—	—
55—65 „ ... ..	2	3	—	—	1	1	—	—
65 and upwards ...	5	2	—	—	3	2	—	—
Totals ... ..	29	39	—	1	27	22	4	5

## **Sanitary Circumstances of the Area.**

### **Water.**

A constant and ample supply of water by gravitation through water pipes is provided by the Municipal Authority, and distributed to all parts of the borough, there being very few houses, even in the more remote and rural parts surrounding the area of greater population, to which the public water service does not reach. Formerly there were many shallow wells supplying individual houses, but successful action was taken to close these many years since, with a marked effect in the reduction of Typhoid Fever outbreaks. The sources of the water supplying the town are springs arising at the base of the oolite of the neighbouring hills, also the head waters of the river Chelt collected into a reservoir at Dowdeswell, three miles from the centre of the town. A second and different source is the river Severn above Tewkesbury. Recourse is had to the river supply as an auxiliary when the water from the hill sources fails in quantity, as is generally the case for about four or five months at the driest time of the year. Very modern and effective means are taken to purify the water both at Dowdeswell and Tewkesbury.

The quality of the water as derived from the hill sources varies but little from year's end to year's end. That from the Severn varies to a greater extent according to recent rainfall, and the amount of lime salts it contains is inconstant for this reason, but the average amount is lower than the average contained in the water from the Springs and the upper Chelt. The lime salts, however, are not excessive in any part of the water supply at any time, being represented by a maximum hardness of about 17 degrees. The methods of purification adopted at Dowdeswell and Tewkesbury are effective as regards removal of bacteria, and organic material, and I am satisfied with the safety of these waters for drinking purposes, and this estimate is partly founded upon observations of their use through a long period of years.

### **Rivers and Streams.**

Cheltenham is not affected, at the present time, by any considerable pollution of the water of the streams that flow through and about it.

### **Drainage and Sewerage.**

Very active measures have been taken to improve the drainage of individual houses, and the general state of house-drainage in the town is comparatively perfect and satisfactory. The annual report of the Sanitary Inspector has shown many houses re-drained in every year during the last 30 years, which fact may be taken as an index of the present state of the drains. There may be a few old house-drains remaining but there cannot be many, nor can those that exist be making their inefficiency so prominent as to lead to their discovery. The lapse of time will however, always bring about defects in drains, and even in the last 5 years 759 new drains were laid with an aggregate length of over 20,000 yards, more than half of that length consisting of heavy cast iron pipes, a desideratum of great importance in clay ground. The provision of proper manholes, traps and ventilators in connection with all renewals of house-drains has also been a marked feature of this work.



Not only is re-drainage work done as the result of inquiring into complaints, and whenever discovered upon inspection or suspicion of defect, but also as the result of inspections and tests made upon the request of any interested person for a sanitary certificate for any class of dwelling-house.

The public sewers of the town tend to suffer from the defects due to passage of time even as smaller drains, and their mode of construction is better to-day than it was half a century ago. Many years ago I made persistent representations to the Health Committee upon this subject which resulted in several of the districts of the town being systematically dealt with in the matter of necessary sewers' renewal. Large improvements followed, and although the work has latterly been checked on financial grounds, there is nothing connected with the sanitation of the town which is more worth being carried to a conclusion.

The treatment of the sewage, here as elsewhere, has passed through a varying history during the long time it has taken to arrive at results that could be deemed fairly satisfactory from the points-of-view of prevention of nuisance in the neighbourhood of the sewage treatment works, and the production of an effluent that could pass into the local water-courses without evident detriment from pollution. The later invented processes, which have been adopted to deal with the Cheltenham sewage, are a great advance upon the old methods, and the disagreeable features that were the common cause of complaint in the neighbourhood of the sewage farms, beyond the borders of the town, have very largely disappeared. The large extension of the tanks and filters that at the time of writing are under construction, should be the last expenditure required in a connection that from beginning to end has proved costly to the town.

### **Closet Accommodation.**

The water-carriage system is of universal application in this town. It was not always usual in building the smallest class of house, in old times, to provide a separate closet for every house. In Cheltenham this unsatisfactory condition, where found to have existence in the poorest streets, has been gradually amended, and the number of instances where a closet is used in common by the inhabitants of more than one house has been greatly reduced. The closet accommodation is really insufficient in every such instance, and we look to the betterment of housing conditions, that is taking place here, to presently entirely abolish a defect of such evident nature. It is only in a few places where this defect is now found, and that in connection with the most insufficient dwellings, which are likely to be amongst the first to be cleared away.

### **Scavenging.**

The removal of house-refuse, as carried out under the Borough Surveyor, is done with efficiency and regularity. There are few complaints. The provision, by the owners of houses, of moveable galvanized iron ash receptacles, to contain the refuse between the times of collection, is almost universal, and a constant subject for report by the Sanitary Inspectors, whose lists of houses requiring provision for renewal of receptacles are presented at every meeting of the Health Committee.

The collected refuse is conveyed in covered carts to the destructor where it is burned to innocuous ashes and clinker.



## PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES.

5 Years Survey.

Notifiable Diseases Notified during the 5 years.

Disease.	1921.		1922.		1923.		1924.		1925.	
	Notified.	Treated in Hospital.	Notified.	Treated in Hospital.	Notified.	Treated in Hospital.	Notified.	Treated in Hospital.	Notified.	Treated in Hospital.
Small Pox ...	...	...	...	...	39	39	...	...	...	...
Chicken Pox ...	...	...	...	...	147	...	139	...	140	...
Enteric Fever, Typhoid and Paratyphoid ...	2	1	3	...	20	16	3	2	5	4
Scarlet Fever ...	73	61	151	131	86	74	47	30	26	20
Diphtheria ...	71	62	32	28	43	37	39	34	42	35
Puerperal Fever ...	...	...	2	...	...	...	3	2	1	...
Erysipelas ...	19	...	17	...	11	...	13	...	12	...
Encephalitis Lethargica ...	1	...	...	...	1	1	1	1	2	...
Acute Poliomyelitis..	...	...	...	...	...	...	1	..	1	...
Pneumonia ...	26	...	32	...	14	...	9	...	13	...
Ophthalmia Neonatorum ...	3	...	3	...	3	...	1	...	1	...
Measles ...	112	...	Measles	no	longer	notified.				
Cerebro-spinal Meningitis ...	2	...	1	...	...	...	...	...	...	..
Malarial Fever ...	...	...	1	...	...	...	...	...	...	..

### Notes upon specially interesting Outbreaks of Infectious Sickness 1921 — 1925.

#### Small Pox.

Foremost in interest of our experiences under the above heading stands the occurrence of Small Pox in 1923. Since the great epidemic of this disease in the neighbouring town of Gloucester in the year 1896, with its more than 2,000 cases of Small Pox of the old dangerous type, when the disease was introduced into Cheltenham twenty times without spreading, our experience of the disease had been very casual and minor. In 1923 we were fated to be introduced to a new type of Small Pox, that was so mild in its symptoms, and so trifling in its death-rate, as to almost suggest that it was really another and less serious disease. Other considerations however, contradicted such an assumption, and rendered it certain that the disease was Small Pox in a mild form. Although at this time very little was known of this mild type of Small Pox in England, the report of its occurrence here quickly brought into greater prominence

similar reports of the same thing having occurred in several other countries, particularly in the United States and South Africa. The diagnosis of the first cases seen in Cheltenham confused the disease with Chicken-pox, but these cases were isolated as being uncertain, and themselves and contacts watched from the outset, and a strict limitation was put upon the outbreak which extended to only 39 cases, which were all isolated, in hospital, and it may be that two or three of those were veritable Chicken-pox.

In Gloucester, as in 1896, the circumstances were less fortunate. The outbreak that occurred there was largely neglected for some months on the supposition that the disease was nothing more than Chicken-pox, and in the end a very grave commotion was caused by the appointment of a special staff of officials, and the necessity of adopting extraordinary measures to stem the epidemic. Probably our first infection was derived from Gloucester. Certainly some of our later cases were so derived. Public vaccination had gone to a very low ebb in Gloucester, which happens to be the place of residence of the leader of the anti-vaccinists. In Cheltenham also there had been for many years a falling off in the number of vaccinations of infants, and others, annually affected, so that we also were to a very large extent an unvaccinated community.

Ample evidence was gained of the power of ordinary vaccination by calf lymph to prevent this milder form of Small Pox, and a corroboration of this power was as undeniably evidenced here, by the fact being repeatedly proven that unvaccinated patients after suffering an attack of this mild Small Pox were rendered immune to the effects of vaccination. In case of doubt of diagnosis, vaccination after the attack of the disease is of great aiding use to signify that the case has been Small Pox and not Chicken-pox, the latter disease being neither prevented by the usual vaccination, nor itself capable of preventing vaccination taking effect after an attack of it has recently been suffered.

Our 39 cases of mild Small Pox occurred between the middle of February and the end of September of 1923, but 27 of them had occurred by the end of April. 25 of the 39 cases were of school age, 7 under 5 years, 2 adolescents, 2 young adults, 3 adults over 40, two of them being mothers of children who were also patients. None of the younger cases had been vaccinated, and of the adults none since infancy. The cases included 24 females and 15 males.

At the time of the outbreak special public vaccination was offered gratuitously, the Vaccination Authorities giving every possible assistance in the matter. An ample supply of lymph was sent from the Government Establishment in London, and about 5,000 vaccinations at this time were estimated to have been successfully performed in Cheltenham on persons of varying age.

The disease died out both here and ultimately in Gloucester in a very definite way, following the rule of that limitation in time, which is to be observed in all epidemic occurrences. That it did die out, and is universally recognised as having done so, is evidence in itself sufficient to refute the proposition that it was not a definite disease distinct from Chicken-pox. We adopted the notification here of Chicken-pox at the outbreak of the Small Pox, as a precaution against the confusion of the two diseases, and I personally visited and saw practically all the cases of Chicken-pox

that were notified after the notification was required, there being but few exceptions where second and further cases, occurring in the same family about the same time, rendered the visit unnecessary, and the requirement of notification of Chicken-pox has not yet been relaxed.

The number of Chicken-pox cases notified in the year of the Small Pox occurrence, i.e., 1923, was 147. In 1924, 139. In 1925, 140. After September 1923, not one case of the Chicken-pox cases notified to the end of 1925 was in the least doubtful, as being at all like the cases of mild Small Pox that were encountered and removed to hospital in 1923, but all could be easily and instantly diagnosed as Chicken-pox.

My further notes in connection with this experience of mild Small Pox may be found in two papers with photographic illustrations, which I contributed at the time to "The Lancet" of June 23rd, 1923, and "Public Health" of December, 1923.

### **Enteric or Typhoid Fever.**

Whilst the numbers of cases of this disease occurring in England, of the type formerly recognised and feared on account of its high mortality, have lately diminished greatly, the development of Bacteriology has brought to our acquaintance the actual nature of milder types of fever that are now recognised as being allied to Typhoid, being diseases caused in the same way by variant germs, and bearing the title of Paratyphoid, with a further division of this latter term into Paratyphoid "A" and Paratyphoid "B."

Apart from the interest, information, and credit attaching to the work of the bacteriologists in this connection, lies the important fact of the relative present-day infrequency of severe forms of Enteric Fever, whether epidemic or sporadic, whose cause, if it be not temporary, must lie in some influence, or set of influences of broad application. In Cheltenham, instead of our former occasional outbreaks of Enteric Fever, or occurrence of dangerous solitary cases, that together produced a considerable death-rate, the number of cases notified having averaged for many years 20 per annum, with about 12% of deaths, we have had in the last 5 years an average number notified of 6 per annum, chiefly Paratyphoid cases, with one death only in the 4 years, equal to a case death-rate of 3%. The death-rate per annum per 1,000 living of population being .004 or nothing in 4 years and .02 in 1 year of the 5 years.

The number of cases that occurred here in the 5 years would have been quite trivial but for those cases of Paratyphoid which were notified in 1923 and which were altogether 20 in number. The report I made at the time may here be usefully revived to indicate the nature of the happening, as well as to reproduce some critical comments arising out of my long experience as a medical officer of health in connection with certain means of bacteriological diagnosis.

### **Paratyphoid Fever.**

"In the last three months of the year 1923, twenty cases of Paratyphoid Fever were notified in Cheltenham. Between October 8th and 25th inclusive, the disease developed in six school-boys, living in four different houses, three of them being brothers. The six attended three different schools here, and had recently returned at the expiration of the



summer holidays to resume school. Two of them who attended the same local college had spent some time together during the latter part of the holidays. Otherwise there was no connection between the 4 families. The time from the end of the holidays to the onset of the symptoms was so near in these cases as to suggest that the disease was contracted during the holidays. With one boy this seemed certain, his illness beginning immediately upon his return. In regard to the 3 brothers, enquiry elicited the fact that a case had been notified at the seaside village in Norfolk where they had stayed prior to their return to Cheltenham, and the incubation period of the disease for the first of this family to fall ill appeared to date back to his Norfolk sojourn. No common cause for the whole of these six cases could be discovered in Cheltenham. In these cases the symptoms were definite.

“On the 15th and 20th of November and on the 14th of December 3 other definite cases were notified in as many families, and 2 of these had been in the habit of visiting Gloucester almost daily in connection with institutions there, amongst whose members some other cases had occurred and been notified in Gloucester, where a greater prevalence of paratyphoid fever than that experienced in Cheltenham had developed.

“The 3rd case was a child of 3 years of age. This child had been partly fed on cream, and cream as a cause was under suspicion at Gloucester, but no other cases deriving cream from the same source in Cheltenham were heard of. An enquiry here as to sources of cream brought out the fact that cream variously preserved is imported from numerous places outside the district, and even so distantly as from Scotland. It is quite possible that in the process of separation of cream, certain bacteria of light specific gravity come out of the milk with the cream, cream being consequently liable to contain a concentration of these bacteria, which would be more potent for producing any effect of which the bacteria were capable, than they would be as contained in the whole milk. The evidence of cream being a cause of the outbreak was however, quite inconclusive here, and I believe it was the same in Gloucester.

“Between the 22nd and 27th December, 11 cases of paratyphoid were notified as occurring in the Cheltenham General Hospital in a surgical ward, nearly every one of the cases having recently undergone an operation necessitating an incision into the abdominal cavity.

“I enquired into this matter at the hospital and interrogated all the members of the staff who had had to do with these cases. It appeared that the discovery of their being paratyphoid cases was almost accidental. One of the honorary staff had had cases in his private practice in the town and thought the aspect of the hospital patients was similar. A positive result against paratyphoid “B” bacillus was obtained in each case upon the test being made, and that constituted the diagnosis upon which the cases were notified. The cases were in various conditions of convalescence or recovery from their surgical operations, and it was admitted that so far as actual symptoms went by increase of temperature above the normal, spots on the abdomen or whatever else was observable, such conditions were commonly to be observed in the immediately succeeding history of cases that had been submitted to surgical operation such as these had undergone.

"All the cases were women inasmuch as it was a women's ward. At the same time in the men's ward the same general conditions following similar operations were to be observed, but as there was nothing unusual about this it was not proposed to test their blood, with a view to diagnosing paratyphoid fever by the Widal reaction, and although I am inclined to think this a reasonable decision, the opportunity of endeavouring out of this incident to unfold the real value of the blood test, especially in regard to the occurrence of the "B" bacillus in a class of cases so peculiarly circumstanced, was not followed up. It must be allowed that had there been no surgical operation, and the same symptoms had shown themselves of continued temperature, etc., two or three of these cases might ultimately have been diagnosed as paratyphoid from physical signs and symptoms, and the question is, whether the same might not be said of many such surgical cases in general. A proportion of these cases were operated upon for appendicitis, or other inflammatory or disturbed condition of the alimentary tract, and there is no great improbability in the supposition that Paratyphoid "B" bacillus was present in the bowel before operation. All the cases recovered, in fact some of them were sufficiently convalesced to be discharged from hospital, and were discharged before I received the notifications. These I saw in their homes, but did not think it necessary to take any action in regard to them.

"Each member of the staff of the ward affected, that is the sister, nurses and maids of the ward had their blood tested, and the blood of one of the nurses was found to react strongly against the "B" bacillus, but she had been in the hospital continuously employed for over 3 years, and had suffered no illness whatever in the least suggestive of an attack of any kind of typhoid fever during her life.

"Being pushed no further the business began and ended as above related. Five months have elapsed at the moment of writing this note since the occurrence, without any further case of paratyphoid being notified in the district. The examination of the stools for paratyphoid bacilli was not practised here in any of the cases, and since no further case has arisen, such examinations, and the treatment of any positive cases found would have been for no advantage, though probably very incommoding to the persons most nearly concerned, and costly in labour and money. The fact is, I believe, that the proposition as to the value and necessity of making bacteriological observations of this kind, and following them up by a logical action in accordance with the supposition that the proven presence of some particular bacillus in the contents of the intestine must be evidence of the infectiveness of the subject, and a danger to the community by reason of the spread of paratyphoid fever, amounts to an overstatement not in correspondence with the degree of understanding yet obtained of this matter, and emphatically contradicted by the records kept by medical officers of health, with very rarely occurring exceptions, when, exactly as in the case of Diphtheria, Scarlet Fever, and other diseases, a single case, the one in a thousand perhaps, assumes a specially infectious character. But the discovery of such an exceptional case, when there is evidence of the need to search for it, is one thing. It is quite another, and an unwarrantable thing, to practice a wide experimentation upon suspected contacts of any ordinary case of Typhoid or Paratyphoid, as the results are bound to be incommensurate, in their protective value, with the great labour involved, and particularly



with the deprivation of liberty suffered by the innocent victims. For the great benefit claimed to result from such action it has to be assumed, that, but for such action, the disease will continue and extend to epidemic proportions, a supposition quite opposite to common experience, which rather teaches that outbreaks of Paratyphoid are usually quite limited in extent, unless derived by ingestion of polluted water, or some tainted comestible."

### **Scarlet Fever.**

This disease has lately become of less frequent occurrence. For many years it was never absent in Cheltenham, there being always a case or two, at least, convalescing in the hospital between one admission and the next one. In the 36 years 1890–1925, that is during the whole period during which notification has been in operation here, 4,868 cases of Scarlet Fever have been notified, nearly 90% of which have been treated by removal to the isolation hospital. The total number of deaths was 60 or 12·4 per 1,000 cases.

The value of hospital isolation of Scarlet Fever has of late years been much canvassed, and the Ministry of Health last year sent round a circular of questions to Medical Officers of Health of experience with a view to collecting opinion in this connection. That hospital isolation generally speaking has failed to control the occurrence and recurrence of a prevalence of Scarlet Fever appears now quite certain. Throughout the whole history of notified Scarlet Fever, any considerable sequence of years has shown a somewhat irregular undulation of rise and fall in annual numbers of cases, and there is nothing in the whole occurrence to indicate any particular effect of hospital isolation upon these waves of increase and decrease. Comparisons, so far as they can be made, both as to spread of the disease and case mortality, connected with those treated in hospital and those treated at home, do not appear to indicate any grave disadvantage of treating mild, ordinary cases of Scarlet Fever at home. There has been a definite decrease of numbers occurring in the decade during and since the great war, as compared to previous time, which must have some other explanation than hospital isolation and treatment. As I have already stated, the possible cause which suggests itself to me is that during this later period the standard of living has been raised in the mass of our people, with a better food supply for the children, and a correspondingly higher resistance to Scarlet Fever, and, of course, other diseases. The diminution in the birth-rate, which has been so considerable, has also had its effect in reducing the relative number of susceptible persons in the population.

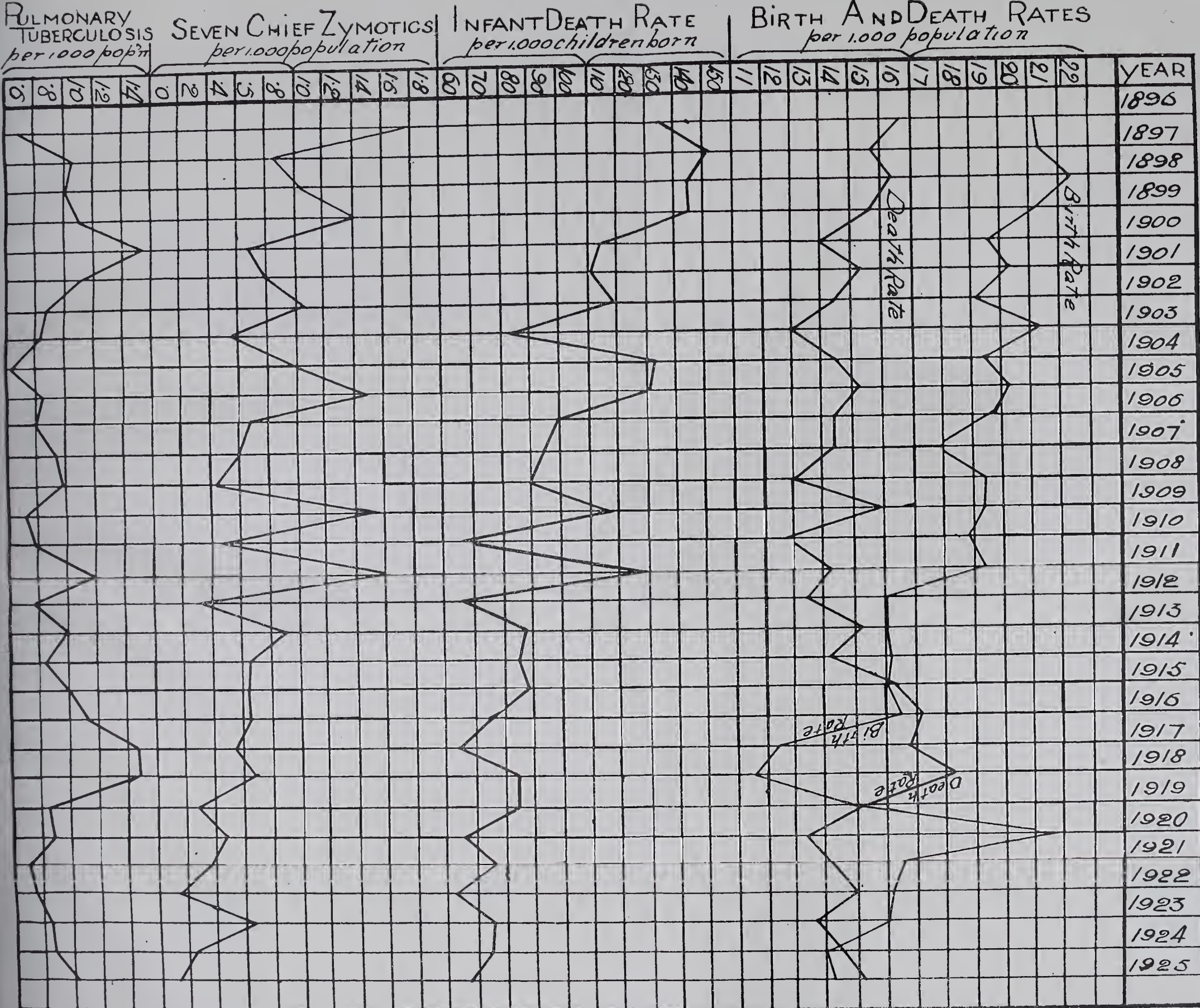
#### **Scarlet Fever cases and Deaths in three following decennia between 1896 and 1925.**

			1896-1905.	1906-1915.	1916-1925.
Cases	...	...	1,657	1,532	592
Deaths	...	...	23	13	6
Deaths per 1000 cases			13·8	8·5	10·1

In the table following these notes, in which the whole of the infectious diseases annually notified since notification began is set out, the rise and fall of Scarlet Fever in Cheltenham can be traced from end to end of the period, and the fact of our 26 cases of last year being the lowest annual incidence ever recorded may be noticed.



Diagram Showing Variations in Birth And Death Rates in Cheltenham During Thirty Years







## Diphtheria.

Considered in the same way in which I have just considered Scarlet Fever, Diphtheria in the 36 years during which it has required notification, i.e., from 1890—1925 inclusive, has caused 1,956 cases to be notified, and there have been 194 deaths or 99.1 per 1,000 cases.

### Diphtheria Cases and Deaths in three following decennia between 1896 and 1925.

			1896-1905.	1906-1915.	1916-1925.
Cases	...	...	619	569	643
Deaths	...	...	70	47	51
Deaths per 1000 cases			113	82	79

Nearly all the cases of Diphtheria notified in Cheltenham have been capable of clinical diagnosis, and practically all the cases numbered above showed decided signs of the disease visible to the eye. The numbers of Diphtheria cases can always be much increased by swabbing throats to find the recognised bacillus of Diphtheria, and notifying positive results as cases of Diphtheria, irrespective of other signs and symptoms. This practice has been discouraged here from the first, and there have been very few notifications based upon bacteriological evidence alone. A critical survey of the claims connected with swabbing and their contradiction by the actual practical experience of the Medical Officer of Health was contributed by myself as a presidential address in the year 1910, under the title "Propositions of To-day in connection with the Prevention of Diphtheria." This was published in the December number 1910 of the journal "Public Health."

In more recent years the hospital treatment of Diphtheria has developed here, until it has reached 86% of cases notified during the last 5 years. My practice of sending Diphtheria cases into hospital has been determined not by fear of spread of infection when they are treated at home, as experience has shown that ordinary cases of Diphtheria, even though they be of severe clinical type, are not very potent to cause further cases of infection. For one thing, contact requires to be pretty close, no doubt, and there is a wide-spread natural protection operative in the bodies of most of the individuals of any ordinary community to prevent infection becoming operative. Experience has also demonstrated that there is a difference in infectiveness between cases of Diphtheria, and that the really infective case is not the more commonly occurring one. But as regards treatment this is so much better attended to in a hospital than in a poor house, and the surroundings in the ward are so much more propitious for cure, than those of a small living room of the often overcrowded dwelling, that for such reasons it usually appears advisable to send the case to hospital.

As compared with Scarlet Fever it will be noticed, in the above statements of the two diseases as they have occurred here during 30 years, how much more serious a disease from the point-of-view of case mortality Diphtheria is than Scarlet Fever, the per case death-rate of the former having been nearly nine times as great as that of the latter disease through that whole period.

## Measles.

This very commonly occurring child's disease has proved exceedingly difficult of control and prevention. It comes in recurrent epidemics separated from one another by two or three years, though in any large population it is likely that there will be some cases in any year. We have

always been made aware of the presence of an epidemic of Measles through our schools, as it has been a marked cause of non-attendance at school of children affected, from time to time. The weekly death list has also brought evidence of the presence of the disease, when this was occurring as an epidemic. The fact that Measles was not included in the list of diseases to be notified, seemed to be an obstacle to any preventive means being adopted, and in a controversy that took place many years ago upon the advisability of notification, I advocated notification as likely to be an assistance to whatever might be found possible to be done to prevent or stem epidemics of Measles. Other Medical Officers of Health were of the same opinion, and at last the Ministry of Health was moved to add Measles to the list of infectious diseases requiring notification, and it was notified in this borough for five years. Before the expiration of this time the Ministry of Health, as a result of the experience gained, withdrew the requisition for compulsory notification, leaving local Sanitary Authorities the option of continuing its notification in their districts according to their own estimate of the desirability. It was continued in Cheltenham for one additional year, and dropped after 1921, the experience being to show here, as elsewhere, that it was not possible to effect any control that made the notification worth while. For what was it that could be done? In one year during the time notification was required, namely 1920, we suffered an epidemic and there were 978 cases of Measles notified, and probably as many escaped notification as would raise the whole number to 1,200. The deaths from Measles during the year in question were only 8, which suggested that some of the epidemics previously experienced were much more severe in type, or produced many more cases, as so many as 47 deaths had occurred in one past year, namely, 1909, and considerably greater numbers in other years. Over nine-tenths of the cases in 1920 occurred during the first three months of the year. In such a visitation, isolation of the cases, whether in hospital or otherwise, is found to be impracticable, and in view of the circumstances and nature of a Measles epidemic, one cannot think that the use of hospitals, even if it could be afforded, would be effective in diminishing either the number of cases or the number of deaths. Home nursing of the worst cases by publicly provided nurses is also a matter of extreme difficulty to make effective. What can be done is what was done here, the engagement of a nurse to call at all the houses, where cases of Measles were known to be occurring, to advise the parents of the seriousness of the disease, and its special liabilities, with a view of exciting greater care, and the appreciation of the need of immediate medical advice upon any symptoms supervening which suggested a serious turn. Whether the nurse's services are recompensed by the damage of the epidemic being rendered less is a practical question the answer to which is too doubtful for positive assertion.

It has not been customary to attempt any effective disinfection of clothing and premises after Measles, as a general operation, and I do not think any much experienced Medical Officer of Health can be found to advocate it as being a measure of value worth its cost. Fortunately, the infection of Measles appears to quickly die out as the result of exposure to air and light, and cleanliness and proper airing of house and clothing may be all that is required.

The interruption of education by the closing of schools on account of Measles should be avoided in an ordinary epidemic, even in the Infants' Department. It is impossible to close them to prevent introduction of infection. It is inexcusable and useless to close them when a large percentage of the children have developed the disease. Probably a good



average half of the Infants' School can be kept in session throughout the five or six weeks during which the school is affected by a Measles epidemic, without any harm being done, and this is a gain over closing the school when the attendance has fallen to 50%, the closing then being utterly useless as a prevention of extension of the disease, considering that Measles has an incubation period of about a fortnight.

### **Tuberculosis.**

The number of cases of Tuberculosis notified annually seems to be decreasing in Cheltenham. The disease has been subject to notification for 15 years in all, more thoroughly for 13 years, and the annual numbers may be studied in the following table.

*Tuberculosis Notifications and Deaths recorded in Cheltenham  
1911—1925 inclusive.*

Cases.	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Pulmonary..	81	103	135	115	92	97	75	74	77	80	66	77	65	65	49
Non Pul'ary	..	..	25	38	52	37	25	12	4	16	22	14	12	10	2
Deaths (Pulmonary)	59	39	49	40	51	47	61	63	38	41	35	37	41	42	49

15% may be added to the notifications of pulmonary cases for those that failed to get notified, and the whole result will then be approximate.

As Cheltenham is not a County Borough, the management of tuberculosis, including the home visiting part of the work, lies with the County of Gloucester Authority, to whose Medical Officer of Health the notifications here are reported weekly. There are consequently two registers, his and mine, but the movement and happenings to cases are rather within his knowledge than mine. Last year the Ministry of Health made a regulation to cause a periodic comparison of the two registers by a trimonthly report, from the Borough M.O.H. to the County M.O.H., showing the numbers removed from the register of the former, and the number remaining upon it at the end of each three months. The last return showed that the numbers of cases remaining on our register were Pulmonary cases 455 and Non-Pulmonary 113. It has proved a difficult matter to keep all cases in touch, owing to the freedom of movement allowed to cases without necessity of reporting their change of address, the dual system of management not being aiding to this end. But the mutual communication as to the state of the register, recently established as mentioned above, should lead to a more reliable record resulting in future years. The County Officer has the records of the public treatment of Tuberculosis, and it must be for him to report its results as collected at the Sanatoria, the hospitals, the dispensaries, etc. There is perhaps some lack of local detailed information on this score.

### **Other Diseases.**

There is little to be said of the incidence of other infectious diseases. Influenza, continued through the five years a sufficiently prominent cause of death. We were touched by each of those microbic diseases of the nervous system—Encephalitis lethargica, Cerebro-Spinal Meningitis and Acute Poliomyelitis, the numbers during the 5 years attributable to these diseases in the order as above, being 5, 3 and 2. The one odd case of Malarial Fever was but a mild home return attack, occurring in a soldier who had served in a country where malaria is of common occurrence.

CAUSES OF DEATH, &C., IN THE BOROUGH OF CHELTENHAM AS GIVEN BY THE  
REGISTRAR-GENERAL FOR EACH OF THE FIVE YEARS 1921—1925 INCLUSIVE  
(CIVILIANS ONLY).

Years .. ..				1921.		1922.		1923.		1924.		1925.	
CAUSES OF DEATH.				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
All Causes	...	...	...	304	384	338	388	277	391	313	394	312	423
1. Enteric Fever	...	...	...	...	...	...	...	...	...	...	1	...	...
2. Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Measles	...	...	...	...	...	...	...	6	5	2	3	1	2
4. Scarlet Fever	...	...	...	...	1	1	...	2	...	1	...	...	1
5. Whooping Cough	...	...	...	2	2	...	...	3	7	1	1	...	1
6. Diphtheria	...	...	...	6	1	1	2	3	...	...	...	1	...
7. Influenza	...	...	...	3	17	18	18	3	7	16	22	6	16
8. Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	1	1	1	...
9. Meningococcal Meningitis	...	...	...	1	1	...	...	...	...	...	...	...	...
10. Tuberculosis of Respiratory System	...	...	...	20	15	14	23	22	19	21	21	27	22
11. Other Tuberculous Diseases	...	...	...	5	9	13	5	3	10	7	9	4	5
12. Cancer, Malignant Disease	...	...	...	31	48	29	46	27	46	39	57	30	64
13. Rheumatic Fever	...	...	...	...	...	...	1	1	...	...	...	...	1
14. Diabetes	...	...	...	3	1	4	6	2	2	2	4	2	7
15. Cerebral Hæmorrhage etc.	...	...	...	13	33	18	23	12	40	18	28	25	33
16. Heart Disease	...	...	...	32	61	45	70	39	50	31	70	40	62
17. Arterio-Sclerosis...	...	...	...	9	16	21	20	13	22	19	19	21	15
18. Bronchitis	...	...	...	24	17	25	27	10	15	18	29	13	22
19. Pneumonia (all forms)	...	...	...	19	22	18	23	20	27	24	18	19	20
20. Other Respiratory Diseases	...	...	...	5	7	5	4	5	5	5	4	2	4
21. Ulcer of Stomach or Duodenum	...	...	...	2	...	3	3	2	3	4	1	3	2
22. Diarrhœa, etc. (under 2 years)...	...	...	...	6	1	3	2	2	4	1	2	1	1
23. Appendicitis and Typhilitis	...	...	...	...	3	4	2	5	3	5	4	4	6
24. Cirrhosis of Liver	...	...	...	...	1	...	...	3	1	3	...	2	...
25. Acute and Chronic Nephritis	...	...	...	10	8	14	5	10	12	9	12	10	12
26. Puerperal Sepsis	...	...	...	...	...	...	1	...	4	...	2	...	...
27. Other Accidents and Diseases of Pregnancy and Parturition	...	...	...	...	4	...	...	...	2	...	1	...	2
28. Congenital Debility and Malformations Premature Birth	...	...	...	19	12	16	8	10	6	12	8	12	10
29. Suicide	...	...	...	6	...	6	1	6	7	3	3	7	3
30. Other Deaths from Violence	...	...	...	6	3	6	5	7	3	7	6	6	8
31. Other defined Diseases	...	...	...	81	97	74	93	60	91	63	68	75	101
32. Causes ill-defined or unknown...	...	...	...	1	4	...	...	1	...	1	...	...	3
Special causes included in above	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Polioencephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Deaths of Infants under 1 year of age	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	39	17	27	18	28	25	26	19	22	20
Illegitimate...	...	...	...	4	3	2	2	4	4	5	2	2	4
Total Births	...	...	...	408	401	412	377	417	378	355	339	351	357
Legitimate	...	...	...	384	382	383	357	395	360	332	319	327	338
Illegitimate	...	...	...	24	19	29	20	22	18	23	20	24	19
Population	...	...	...	48,040	...	48,020	...	48,330	...	48,810	...	48,770	...

Leading Health Statistics in the Borough of Cheltenham during the last 30 years based upon a new estimate of Population as corrected by three decennial census returns 1901, 1911, 1921.

Rates are at per 1,000 of Population except Infant Death-Rate at per 1,000 born.

Year	...	...	...	...	1896	1897	1898	1899	1900	census 1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	census 1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	census 1921	1922	1923	1924	1925
Population	...	...	...	...	49,000	49,000	49,000	49,000	49,000	49,139	49,390	49,342	49,293	49,245	49,196	49,148	49,099	49,050	49,002	48,944	48,893	48,841	48,790	48,738	War years. A special population supplied by the Registrar-General, that for births differing from that for deaths.					48,430	48,500	48,500	48,500	48,500
No. of Deaths	...	...	...	...	826	776	804	775	688	757	715	643	714	747	711	708	641	784	624	696	655	743	695	789	720	693	780	687	632	688	726	668	707	737
Death-Rate	...	...	...	...	16·8	15·8	16·4	15·8	14·0	15·4	14·5	13·0	14·5	15·2	14·4	14·4	13·0	15·9	12·7	14·2	13·4	15·2	14·2	16·2	17·1	16·8	18·3	15·3	13·5	14·2	15·0	13·7	14·6	15·1
* do. Net	...	...	...	...	14·6	13·7	14·3	13·7	12·2	13·4	12·6	11·3	12·6	13·2	12·5	12·5	11·3	13·8	11·1	12·4	11·6	13·2	12·4	14·1	14·8	14·6	15·9	13·3	11·7	10·7	11·3	10·3	11·0	11·4
No. of Births	...	...	...	...	1041	1043	1090	1044	968	1005	945	1062	961	995	975	881	955	949	926	943	783	783	788	770	760	572	560	699	1028	809	789	795	694	708
Birth-Rate	...	...	...	...	21·2	21·3	22·2	21·3	19·7	20·3	19·1	21·3	19·5	20·2	19·8	17·9	19·4	19·3	18·9	19·3	16·0	16·0	16·1	16·0	16·6	12·4	11·7	14·9	21·8	16·7	16·2	16·0	14·0	14·3
Infant Death-Rate	...	...	...	...	135	151	146	147	115	111	120	85	133	131	100	95	90	119	68	127	66	88	86	89	76	66	85	85	66	69	57	66	64	60
7 Chief Zymotics Death-Rate	...	...	...	...	1·97	·91	1·06	1·40	·71	·80	1·02	·57	·99	1·46	·68	·60	·43	1·51	·49	1·60	·34	·88	·64	·63	·64	·56	·65	·28	·45	·39	·18	·66	·24	·16
Influenza Death-Rate	...	...	...	...	·04	·22	·53	·57	·36	·32	·24	·22	·18	·16	·18	·36	·22	·24	·48	·06	·22	·24	·22	·51	·47	·17	3·72	·95	·19	·41	·73	·20	·77	·45
Tuberculosis do. (Pulmonary)	...	...	...	...	·71	1·04	1·00	1·12	1·55	1·13	·88	·85	·63	·85	·80	·95	·99	·71	·79	1·20	·79	1·00	·82	1·00	1·13	1·48	1·49	·84	·89	·72	·76	·84	·86	1·01
Tuberculosis do. (Other)	...	...	...	...	·87	·45	·34	·49	·61	·38	·56	·68	·56	·69	·26	·36	·28	·32	·59	·31	·18	·49	·24	·39	·26	·17	·30	·28	·29	·28	·37	·27	·32	·18
Cancer do.	...	...	...	...	·92	1·14	1·20	1·06	1·12	1·52	1·11	1·19	1·15	1·05	1·12	1·30	1·34	1·45	1·14	1·39	1·22	1·57	1·26	1·56	1·92	2·08	1·90	1·55	1·45	1·62	1·54	1·50	1·98	1·94

\* The nett Death-Rate is obtained by multiplying the crude rate by a fraction, to diminish it for comparison with the Death-Rates of other places, the average age of whose populations varies from that of our own, which is high. The first factor supplied to me for this purpose by the Registrar General was ·8709 which in the above statistics is used up to the census of 1921, after which the R.G. supplied a new factor ·755 which I have applied to the last 5 years. The Cancer Death-Rate should be lessened for the same reason, but no factor has been worked out.

The Registrar General's populations for 5 war years were as follows:—1916, for births 45,746, for deaths 42,045; 1917, for births 42,905, for deaths 41,181; 1918, for births 47,726, for deaths 42,595; 1919, for births 46,863, for deaths 44,985; 1920, for births 47,018, for deaths 46,778.





ZYMOTIC DISEASES NOTIFIED IN CHELTENHAM ANNUALLY SINCE NOTIFICATION BEGAN.

Year	Scarlet Fever	Diphtheria	Enteric Fever and Paratyphoid	Puerperal Fever	Small-pox	Erysipelas	Poliomyelitis	Cerebro-Spinal Meningitis	Pneumonia	Ophthalmia Neonatorum	Dysentery	Encephalitis Lethargica	Malaria	Measles	Chicken Pox
1890	93	16	24	2	...	...	...	...	...	...	...	...	...	...	...
1891	75	15	19	...	...	...	...	...	...	...	...	...	...	...	...
1892	264	10	10	...	...	...	...	...	...	...	...	...	...	...	...
1893	419	33	63	4	2	...	...	...	...	...	...	...	...	...	...
1894	147	26	27	1	3	...	...	...	...	...	...	...	...	...	...
1895	89	25	34	3	1	...	...	...	...	...	...	...	...	...	...
1896	126	60	26	4	22	...	...	...	...	...	...	...	...	...	...
1897	224	43	20	1	...	...	...	...	...	...	...	...	...	...	...
1898	296	52	23	5	...	...	...	...	...	...	...	...	...	...	...
1899	273	80	16	...	...	...	...	...	...	...	...	...	...	...	...
1900	103	74	32	1	...	21	...	...	...	...	...	...	...	...	...
1901	67	58	18	1	...	16	...	...	...	...	...	...	...	...	...
1902	147	63	18	3	1	19	...	...	...	...	...	...	...	...	...
1903	142	65	17	...	1	25	...	...	...	...	...	...	...	...	...
1904	143	59	7	...	...	25	...	...	...	...	...	...	...	...	...
1905	116	65	16	...	4	42	...	...	...	...	...	...	...	...	...
1906	104	61	24	6	1	37	...	...	...	...	...	...	...	...	...
1907	30	71	14	...	...	16	...	...	...	...	...	...	...	...	...
1908	79	53	12	1	...	20	...	...	...	...	...	...	...	...	...
1909	87	39	20	2	...	24	...	...	...	...	...	...	...	...	...
1910	81	90	8	2	...	27	...	...	...	...	...	...	...	...	...
1911	77	26	34	...	...	34	...	...	...	...	...	...	...	...	...
1912	193	19	10	...	...	27	...	...	...	...	...	...	...	...	...
1913	335	49	11	3	...	45	4	...	...	...	...	...	...	...	...
1914	328	103	17	5	...	39	1	1	...	9	1	...	...	...	...
1915	218	58	7	3	...	47	2	...	...	8	...	...	...	...	...
1916	61	66	15	1	...	25	10	...	...	6	...	...	...	...	...
1917	33	105	2	1	...	15	6	1	...	3	1	...	...	613	...
1918	29	107	6	3	...	19	1	1	...	3	1	...	...	419	...
1919	28	52	8	2	...	21	3	1	34	9	1	...	3	49	...
1920	58	86	4	...	...	15	...	...	14	8	...	...	...	978	...
1921	73	71	2	...	...	19	...	2	26	3	...	1	...	112	...
1922	151	32	3	2	...	17	...	1	32	3	...	...	1	...	...
1923	86	43	20	...	39	11	...	...	14	3	...	1	...	Notification ceased	147
1924	47	39	3	3	...	13	1	...	9	1	...	1	...	...	139
1925	26	42	5	1	...	12	1	...	13	1	...	2	...	...	140
Annual Average	134	54	17	1.7	2	20	2.2	0.6	20	4.8	0.3	1	0.6	434	142

## HOUSING IN CHELTENHAM.

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The post-war condition of shortage of houses extended to this town, and notwithstanding the fact that prior to 1914 we had for long suffered from such a condition of chronic surplus as was represented by 800 vacant houses, with a great depreciation in the sale price of houses, including many of our large terrace houses in particular, we were destined, here as everywhere, to experience a lack of housing accommodation.

The want has been most acutely felt amongst the poorest, and upwards through the smaller middle-class, whilst the more eligible villas have been in demand and often sold at double the price asked before the war. The difficulties of obtaining efficient domestic servants, as well as the generally increased cost of running the largest houses, have prevented so great a demand for these as private residences, but a considerable number of these, that looked like being thrown out of use, have been converted to private hotels, offering a means of avoiding the tiresomeness of house management under present conditions, of which many people have availed themselves. The old business of offering furnished apartments for visitors, or temporary residents, who would do their own catering, has decayed; the private hotel, again, more conveniently supplying the need. The larger terrace houses, where furnished rooms used to be let, have in several places been converted into self-contained flats, to be let furnished or unfurnished, some of them sufficiently commodious to supply the needs of family life.

The demand for smaller houses by well-to-do tenants has been met to a considerable extent by the first Corporation building scheme, in the locality of St. Mark's, where 304 houses have been erected.

The poorest class of residents are least well provided for. In this class is seen the worst effect of insufficient housing, though on the whole this effect is due to an old time deficiency rather than to an extraordinary pressure arising since the war. We have not here experienced the extreme inconvenience suffered in many of the busier industrial towns. There is no more overcrowding of the houses by inhabitants now than there ever has been, but rather less. We have always possessed a large number of houses too small in size and too ill-found in domestic conveniences for proper family life. But overcrowding caused by the conditions that followed the return of the soldiers from the war has been discounted by the fall in the birth-rate in Cheltenham.

In this town the under-population of the houses is much more remarkable than their overcrowding. The last census return showed that an average number of persons per family throughout Cheltenham had sunk to 4, and in some of our poorest streets the average number of inhabitants per house is less than 4. In my evidence at the Inquiry concerning Stanhope Street as an "Unhealthy Area," I was not able to instance overcrowding in the houses. There were between 60 and 70 occupied houses and only 2 that could be said to be accommodating families of too large a size, and the cubic capacity insufficient for a large family of children may suffice for 2 or 3 old people. I believe the demand in Cheltenham for houses of the smallest size by the poorest people is

likely to be limited and soon supplied. The matter of course is complicated by poverty, and the consequent inability to pay higher rents. No doubt, however, there are a good many people who, where it pays them to do so, will take or purchase a new house that has the advantage of having been erected at a cost partly covered by a Government subsidy. These will always be people with a moderately comfortable income, and not the poorest poor. The poorest will do nothing to help themselves, and are destined to continue to occupy the worst houses that exist at all times, partly because they are content to occupy them, and rather resent being compelled to quit them.

Representations as to houses being unfit for habitation and forming an "Unhealthy Area" were made as long ago as 1917, but action in connection with them had failed on account of difficulties of rehousing the occupants. In 1923 the greater part of the houses involved in the former action, which were also those in worst condition, namely, those constituting Stanhope Street, were made the subject of a new representation as an "Unhealthy Area." Action followed, which at last has resulted in the acquisition of the whole site of the street with all its houses by the Town Council, together with further land in the immediate neighbourhood, and the preparation of building schemes providing such accommodation that will allow of the demolition of the old houses of the street, and including the rebuilding of the street itself in a broader, more commodious way as part of the new provision. The whole new building scheme proposed for this neighbourhood will, in fact, provide not only the compensatory dwellings, required under the scheme connected with the actual "Unhealthy Area," but will also supply a considerable surplus as additional dwellings in our most populous ward. This work is now well advanced and can hardly fail to be followed to a successful completion.

Action in Cheltenham for getting rid of houses unfit for habitation is not for the present again likely to be of the nature of that by which we have dealt with Stanhope Street. This being considered an "Unhealthy Area," permitted of the acquisition of the whole street, and the unfit houses becoming public property could be controlled and dealt with at the will of the Town Council. We have no other aggregation of houses in such a bad condition generally as Stanhope Street. Our worst houses are distributed here and there apart, and will have to be dealt with more or less individually under another legal power, where no such public control will be obtained, but the owners will have to be given the opportunity to make their properties fit for habitation, and the action will consequently be partial, and not thorough, without any compulsory compensatory building as in the Stanhope Street Scheme, or means of forcing the inhabitants out of the condemned houses into better ones. This action therefore, in spite of any determination on the part of the Medical Officer of Health, and the Housing Committee, to carry it through, looks like being a matter of long delay and partial execution, in which succeeding officials and committees may be engaged not very effectively into a far future.

Action against property can only be in accordance with law, but the law allows a Sanitary Authority to build houses independently of demolishing those unfit for habitation, and houses can be built in anticipation of their being called for, as the result of any action that can



be brought to bear against the worst properties, or otherwise because required. Having arranged for the building of 79 houses in the Stanhope Street neighbourhood to meet the need occasioned by this slum clearance, the Town Council is purchasing further land in the North Ward, lying between Marle Hill Road and Folly Lane, with the intention of building upon it more houses, similar to the others built in the same ward, which in their superiority over the old houses of the neighbourhood are quite admirable. It is deemed that the provision of these houses must assist in the amelioration of the general housing conditions of the town, in any case, by the very fact of their being available. I have no doubt such new houses, to that limited number, will find ready occupation, though not by the poorest poor, or those at present worst housed, as a matter of permanency.

There is a point in the building of new houses in Cheltenham, after which the economic return will diminish. Ten years may be sufficient to put another aspect upon this question. Reference to the statistical part of this report may lead to a suggestion of uncertainty in regard to our future population. The only thing likely to increase its number would be the unforeseen introduction of some considerable industrial enterprise. The reduction of the population would lead to more available houses. The further diminution of the birth-rate would be a factor leading to a lessening of overcrowding as well as of population. We might rather easily return to our former housing condition which exhibited 800 empty houses. A loss of each decimal point in the average number inhabiting our houses results in a diminution of about 1,200 in the population.

#### **Provision of New Houses under Corporation Scheme to-date.**

At St. Mark's,--all built or in course of building ...	...	...	304
Stanhope Street neighbourhood,—built or projected ...	...	about	79
Further houses proposed to be built on available sites ...	...	about	100

The worst feature connected with the housing of the poor at the present time concerns the underletting of rooms by the tenants of houses, which have been taken for this profiteering purpose, to poor persons at a very high rent. The rooms purport to be furnished, and the houses to be let in furnished apartments. The furniture provided is of the most meagre description, generally very imperfect and dirty, and the rent charged is out of all proportion to the value of either place or furniture. The superior tenant excuses the exorbitant charge by a statement of losses through non-payment of rent, and the present difficulty of getting a bad tenant out of the house when once within it, and there is some reason in this, the sub-tenants commonly being in a most poverty stricken state.

The chief instance of houses occupied in this way in Cheltenham is to be found in St. Paul's Street South. There are a few others in Grove Street and elsewhere. The legal powers for dealing with such conditions are ineffective for much good. The occupation of the basement rooms of the houses in St. Paul's Street South has been interdicted, as they do not answer the requirements of cellar dwellings, their ceilings not reaching



to a sufficient height above ground. But the Bye-laws for Houses-let-in-Lodgings, which give power for the keepers of such places to be called upon to register them, avail little in controlling them, or amending their conditions. Apart from the profiteering, it is a matter largely of personal defect in the sub-tenants, and the proper provision for it is the Poor Law Institution, or some such public hygienic habitation, entry into which should be made compulsory in the proposed new law for the unification of Public Health management, for those who are incapable of keeping a house, or rooms, in a sanitary state.

## INSPECTION AND SUPERVISION OF FOOD.

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### **Milk Supply.**

The effort to improve the quality of milk by the Milk (Special Designations) Order has resulted in this district in the issue of three licences for the sale of "Certified Milk" and one for "Pasteurised Milk."

The number of samples of "Certified Milk" per month prescribed by the Ministry of Health to be taken for bacteriological examination, and report, have been duly collected, examined, and reported upon, with varying results, that have not always been satisfactory as supplying evidence of bacteriological superiority of the milk. Nevertheless, the methods required to be adopted to enable "Certified Milk" to be sold under this denomination do constitute a safeguard for the supply of a comparatively pure and safe milk in its natural state. Time and temperature will always effect milk for its souring, but the periodic veterinary examination and testing of cows, the cooling and bottling of the milk in sterilized bottles, and their sealing the instant after its production, and the labelling of the milk with the date of production, all of which are required for milk to be legally called "Certified Milk," taken together, may be relied upon to result in a greater constancy and superiority of quality of the milk. For this purpose the regulations for "Certified Milk" faithfully carried out, are the best yet devised. The public demand for "Certified Milk" should grow, so as to lead to a healthy competition amongst its producers with a consequent reduction in price. There is a growing custom of supplying ordinary milk in closed bottles, and the extra cost involved in becoming able to label it "Certified Milk" with the date of production is not so great, but that the price ought to be kept down to very little over that charged for ungraded milk. So far, for the main part, the producers of "Certified Milk" have sought to gain an additional profit for this commodity out of proportion to the additional prime cost. This has proved a bar to its use, which requires to be removed, and which I believe it possible to remove."

The value of "Pasteurised Milk," in my opinion, is less evident than that of "Certified Milk." It has to be put through an apparatus in which it is kept for a time at an elevated temperature, which destroys germs, and delays the souring process, and it is for this last mentioned reason that pasteurising apparatus has come to be used by milk producers, rather than for any other object, as it permits milk to be kept for a longer period and reduces the waste from souring.

I have some experience here in Cheltenham of the proneness of "Pasteurised Milk" to chance re-infection with deleterious germs. Its handling is a longer, coarser, and less precise business than that required for "Certified Milk," and its sale in closed bottles is not exacted. It is not in its natural state when supplied, and whereas "Pasteurised Milk" cannot be sold under this designation until treated in the prescribed way by the licensee, it can be sold as ordinary milk without a label or comment.

Under the Milk and Dairies (Consolidation) Act which was recently brought into operation, a Veterinary Inspector has been appointed by the Cheltenham Town Council. It remains to be seen whether those provisions of this Act which are directed against Tuberculosis in cows can be made effective to such an extent as to be worth the cost and trouble involved. The complications of the procedure are most considerable, and are likely to help to defeat the object of the provisions, which, if carried determinedly to a logical end, might require the compulsory slaughter of many cows, and be a serious thing for the agriculturists. The action of the Medical Officer of Health as stated in Section 4 is based upon his having "reason to suspect that Tuberculosis is caused, or likely to be caused, by the consumption of any milk which is being sold or exposed, or kept for sale within the area of the local authority." In such case "he shall endeavour to ascertain the source or sources of supply, and on ascertaining the facts shall forthwith give notice of them to the Medical Officer of Health of the County or County-borough in which the cows from which the milk is obtained are kept—unless the local Authority are themselves the council of that County or County-borough."

In connection with all the cases of Tuberculosis that are notified to him, the Medical Officer of Health has seldom—practically never—definite suspicion that the case has been caused by the consumption of milk, such as would impel him to endeavour to obtain the particular evidence required for him to report it, and for the further complicated and serious action which such a report would involve. The application of these provisions are, in my opinion, likely to be too limited to have any marked effect upon the quality of milk.

I reiterate my opinion that the best policy in regard to milk is to encourage the producers to obtain licences to supply "Certified Milk," and to encourage the public to demand it.

In regard to action in connection with meat and other food substances, a summary drawn up by the Chief Sanitary Inspector will be found on another page. The result of action under the Sale of Food and Drugs Act will be found below.

*Summary of Analytical Work under Sale of Food and Drugs  
Act pertaining to Cheltenham—5 years ; 1921—1925.*

G. EMBREY, ESQ. AND R. H. ELLIS, ESQ.,  
Public Analysts.

1921—41	Samples were taken for analysis and all found genuine.			
1922—81	„	„	„	77 found genuine 4 not genuine
1923—90	„	„	„	84 „ „ 6 „ „
1924—69	„	„	„	52 „ „ 8 „ „
1925—78	„	„	„	69 „ „ 9 „ „

Prosecutions followed with the following convictions and fines :—

1921—No prosecutions.

1922—Milk 20% Water added.	Fined £2 and £1 1s. Analyst's Fee.
„ — „ 7% „ „	„ £1 and £1 1s. „ „
„ — „ Deficient in Fat.	„ £2 and £1 6s. Costs.
1923— „ „ „	£1 5s. „
„ — „ 10.5% Water added.	Case withdrawn on payment of Analyst's Fee £1 1s.
„ — „ Deficient in Fat.	Fined 10/- and £1 1s. Analyst's Fee.
„ — „ 8% Water added.	„ £3 and £1 1s. „ „
„ — „ 8.9% „ „	„ £1 and £1 1s. „ „
1924— „ Deficient in Fat.	„ 10/- and £1 1s. „ „
„ — „ Colouring matter added.	„ 10/- and £1 1s. „ „
„ — Vinegar adulterated with water	„ 10/- and £1 1s. „ „
„ — Cream not marked to show it contained Boric Acid.	„ £1 and £1 1s. „ „
„ — Cream not labelled and con- taining over 4% Boric Acid.	„ £3 and £2 2s. „ „ (Two counts).
1925—Milk 4% water and colouring matter added.	„ £1 and £1 1s. „ „
„ — Milk colouring matter added.	„ 10/- and £1 1s. „ „
„ — „ 7.8% Water added.	„ £2 and £1 1s. „ „
„ — „ Deficient in Fat by 6%.	„ £2 and £1 1s. „ „
„ — „ „ „ 18.3% „	„ £2 and £1 1s. „ „
„ — „ „ „ 17.7% „	„ £5 and £4 6s. 6d. Costs.
„ — „ Deficient in Fat and added water.	„ £5 and £4 10s. „
„ — „ Deficient in Fat by 14.7%	Case dismissed.
„ — Cream not labelled as preserved Cream.	Fined £2 and £1 1s. Analyst's Fee.

## MATERNITY AND CHILD WELFARE.

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The general arrangements in connection with this subject in Cheltenham include the action and supervising interest of the Town Council through its Maternity and Child Welfare Committee assisted by a voluntary society, called the Cheltenham Voluntary Health Society.

The latter body conducts three Maternity and Child Welfare Centres situated to command the three poorer-class districts of the town. This Society began its work with funds raised by voluntary contributions, but, as the work took on a more public character, these have largely fallen away, and the bulk of the moneys now expended by the Society are derived by grants from the Town Council and the Ministry of Health, with, however, some useful smaller sums won in various ways in the working of the business of the Society. The actual items of the Society's receipts and expenditure may be studied in its last annual financial statement, which will be found below. The Society appoints and pays a secretary and two doctors, one of whom attends to examine ailing children at each weekly meeting of the Maternity Centre. The children are usually brought to the centre by the mothers and are there weighed, and their weight and condition registered, and their feeding, clothing and health are enquired about and attended to. The attendances include infants and "toddlers" up to commencing school age.

The part played by the Town Council lies in the appointment and work of its supervising Maternity and Child Welfare Committee, whose active interest is chiefly financial. This Committee consists of a majority of members of the Town Council, with co-opted members from the Voluntary Health Society, and from the District Nursing Association or Victoria Home. The Town Council appoints two Health Visitors to visit the homes of all infant children born in Cheltenham, whose circumstances of life are such as to lead to the supposition that the advice the Health Visitor can give as to the feeding, care and treatment of the infant will be in place, and such an estimate includes most of the children here born. The visits are at regular periods and this visiting interest is continued up to 5 years of age, when the child, having become a school-child, falls under the inspection and observance of the School Doctor. At these visits of the Health Visitors, mothers are encouraged to bring their children to the centres wherever it seems desirable for them to do so, but naturally this home visiting covers a wider ground than is covered by the attendance at the Centres.

The Voluntary Health Society send in to the Medical Officer of Health a quarterly report, and an annual report, of their work, which are presented to the Maternity and Child Welfare Committee. This is attended by the Medical Officer of Health in an advisory, and part executive capacity, as the Health Visitors are subject to his supervision. He also has the liberty of attending the meetings of the Voluntary Health Society where he exercises, ex-officio, some influence without occupying any supervising position. The dominating position of the Town Council on the Maternity and Child Welfare Committee, to which the work and the larger expenditures and propositions are reported, together with



the permissory influence exercised by the Ministry of Health, which undertakes the return from the Central Exchequer of one half of the main expenditures which are sanctioned by the Minister, constitute a sufficient public control upon the expenditure of the Voluntary Society.

In connection with this work there is a gratuitous supply of milk to necessitous cases, limited in quantity, and strictly limited to the first two years of infant life and to expectant mothers in an advanced state of pregnancy. No milk is given excepting after an enquiry at the house of the applicant by a Health Visitor, and the filling up of a form signed by both parents giving the weekly income, number and respective ages of the members of the family, etc., a definite limitation having been set to eligibility in these connections by the Town Council as required by the Ministry of Health, the provision not being in relief of general poverty, nor even of child welfare, but only of infant welfare.

The Statement of accounts for the year up to March 31st, 1926 of the Voluntary Health Society, and that of the Borough Accountant for the same period in behalf of Maternity and Child Welfare, show together an expenditure in Cheltenham for that year, including the gifts of milk, of £960 leaving a balance in hand with the Society of £16. Of this gross expenditure, £860 is public money, and the additional £100 was raised in various ways by the Society, including £21 16s 4d. from a benefice received through the Charity Commissioners.

In the Annual Report of the Voluntary Health Society given below summary of the activities of the Society will be found.

Considerable assistance is rendered in the Maternity and Child Welfare work by the Cheltenham District Nursing Association, which through their midwives attend the greater part of the births that occur in Cheltenham, and are brought into contact with the expectant mothers before birth takes place. Arrangement has consequently been made with them, for ante-natal addresses to expectant mothers, and a clinic conducted by a surgeon of their staff in connection with difficulties, or any dangerous condition, connected with child-birth, with advice as to the necessity of special treatment in or out of hospital. A small subscription is also given to this same institution in connection with the use of their four beds for in-patients at the Victoria Home, St. James' Square, which accommodation it has recently been proposed to enlarge by the addition of six other beds.

## Deaths from Puerperal Conditions in 5 years.

1921—1925.

<i>Cause of Death.</i>	1921.	1922.	1923.	1924.	1925.
Puerperal Sepsis ...	0	1	4	2	0
Other Accidents and Diseases of Pregnancy and Parturition ...	4	0	2	1	2

## Opthalmia Neonatorum Notified in 5 years.

1921—1925.

	1921.	1922.	1923.	1924.	1925.
Cases notified ...	3	3	3	1	1
Treated at Home ...	3	3	3	1	1
Treated in Hospital ...	0	0	0	0	0
Vision impaired ...	0	0	0	0	0
Vision unimpaired ...	3	3	3	1	1
Total Blindness ...	0	0	0	0	0
Deaths ...	0	0	0	0	0

## Annual Report of Health Visitors.

January 1st to December 31st, 1925.

No. of Children visited (a) one year and under ...	2,263
„ „ „ (b) over one year...	2,624
„ „ „ remaining on Register ...	2,817
„ „ un-notified Births discovered ...	13
„ „ Home Visits paid by Health Visitors ...	7,813
„ „ Attendances of Health Visitors at Centres } (Highbury 84, St. Clare 86, Baker St. 87 )	257
„ „ Talks to Mothers at Centres ...	28
„ „ Children remitted to Hospital ...	27
„ „ Ante-natal Cases visited ...	127
„ „ Chicken-pox „ „ ...	26
„ „ Measles „ „ ...	53
„ „ Whooping-cough Cases visited ...	16
„ „ Mumps „ „ ...	11
„ „ Opthalmia-Neonatorum Cases visited ...	4
„ „ Cases reported to N.S.P.C.C. ... (No prosecutions followed).	8

## Grants of Milk.

(a) To nursing and expectant Mothers ...	46
(b) To infants and children under 2 years of age ...	45
Cost of milk grants during the calendar year 1925	£101 6s. 4d.

Attendances of Infants and Toddlers at the 3 Centres of the Cheltenham Voluntary Health Society in the  
4 Quarters to end of March, 1926.

Quarter of Year	HIGHBURY CENTRE.				CLARE STREET CENTRE.				BAKER STREET CENTRE.			
	No. of Meetings of Centres	No. of Children Attending Infants	Toddlers	Total Attendance of Children	No. of Meetings of Centres	No. of Children Attending Infants	Toddlers	Total Attendance of Children	No. of Meetings of Centres	No. of Children Attending Infants	Toddlers	Total Attendance of Children
End of June ...	10	232	369	601	11	267	203	470	11	360	250	610
„ Sept. ...	11	228	352	580	12	281	172	453	11	343	282	625
„ Dec. ...	12	327	347	674	12	225	202	427	13	345	372	717
„ March ...	13	427	562	989	13	220	327	547	12	399	362	761
Totals for year...	46	1214	1630	2844	48	993	904	1897	47	1447	1266	2713

## Annual Report of the Voluntary Health Society to March 31st, 1925.

By MISS I. SEATON, Secretary of the Society.

In presenting their 17th Annual Report the Committee are glad to be able to report further progress, not only in the increase of numbers, but also in the fact that more and more new mothers are continually being added to the list of regular attendants, thereby showing that the Welfare Centres have become very important institutions, and are a real benefit to the mothers of the town. At the Baker Street Centre six sets of twins are attending (which we believe constitutes a record), and one of these would have been a case of triplets but for the fact that the third baby died. At one Centre, where statistics were taken, 80% of the babies proved to be breast-fed, and far less food is being sold now at all the Centres than in former years, which is very satisfactory. The following is a list of complaints that were brought to the Doctors' notice at the Centre: Asthma 1, Abscesses 2, Bronchitis 12, Burns 1, Convulsions 2, Diarrhœa 6, Eczema 13, Impetigo 6, Ophthalmia Neonatorum 1, Papular Urticaria 6, Stomatitis 4, Strabismus 1. The number of Umbilical Hernia is a little on the wane, but is still too high, we feel.

In May, Dr. Allman Powell resigned his post as Medical Officer to the Highbury Centre and Dr. Basil Taylor was elected in his place. In the same month the Hon. Treasurer, Miss Newton, sent in her resignation owing to ill-health, and Miss Hanson very kindly came to the Committee's assistance in undertaking her duties.

Failing to obtain from the Ministry of Health the increased grant, for which the Society had appealed, application again had to be made to the Town Council, as in April 1925 there was an overdraft of £24 at the Bank, and the Society was being hindered in its work for want of funds. The Medical Officer of Health spoke of the importance of the work at the Maternity and Child Welfare Committee meeting when the appeal was made, and the Town Council decided to make a further grant of £50.

Another "outing" was arranged for the mothers attending the Welfare Centres, and this took place on June 30th, and was much enjoyed. Each mother paid her own expenses by weekly instalments, as before. The place chosen on this occasion was Evesham, and as the day was a real summer one, hot and sunny, the steamer trip up the Avon after Tea was greatly appreciated.

We are sorry to say that the Home Help Scheme has not proved the success that was hoped for, owing to the fact that the mothers cannot afford to pay 15/- a week and provide food, and no women could be found willing to go out for less in the capacity of Helps. A resolution was sent to the Maternity and Child Welfare Committee saying that the Voluntary Health Society had decided to abandon the scheme, as it had not proved a success, but immediately afterwards some applications for Home Helps were received, so the resolution was rescinded and it was decided to continue the scheme for the present.



It had been felt for some time that scales were needed for the Toddlers at the Centres, as the older children are too heavy for the Nurses to lift into the baskets in which the Infants are weighed. As money could not be spared out of the funds for the purpose, it was decided to hold a Jumble Sale, admittance to which was only granted to mothers attending the Centres. It was held on October 2nd, and proved most successful, the sum of £17 18s. 6d. being taken. The scales (including the cases in which to keep them) cost £14 14s. 0d., so a small balance was left in hand.

Mrs. Booy very kindly obtained from the Co-operative Guild a grant of a guinea towards the funds, for which we are extremely grateful to her.

On January 15th, 1926, the mothers were again invited to a Tea and Entertainment at Highbury Schools. Many gifts in the form of cake and money towards the Tea were received from residents in the town, so that nothing had to be taken from the funds for this purpose. After tea "The Laughter Makers," under the direction of Mr. E. Williams, provided an excellent entertainment, for which they most generously gave their services. Although the night was a snowy one, nearly 200 mothers were present, which shows how much they look forward to such an event.

The Council of Social Welfare, which has recently been started in Cheltenham, asked for a representative from this Society on their Committee, and the Secretary accordingly was elected to serve in that capacity.

The Clothes Stalls at the Centres still prove increasingly popular, and we are very grateful to Mrs. Ivelaw Chapman for the able way in which she organises them. The League of Remembrance has undertaken to make garments for the Stalls, and this saves considerable expense, as the cost of making is very often as much as the material.

The Committee are always glad to take this opportunity of warmly thanking the voluntary workers for all the help they so kindly give at the Centres, without which the work could not be carried on.



**SANITARY INSPECTION OF AREA**  
**for the year 1925, and the 5 years ending with 1925,**  
**with notes thereon.**

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*Report of the Chief Sanitary Inspector.*

I herewith submit my report, as Sanitary Inspector for the Borough of Cheltenham, on the work carried out by the Inspectors of the Health Department during 1925. The work done includes systematic house-to-house inspections, the inspection of schools, houses-let-in-lodgings, common lodging-houses, slaughter-houses, food shops, bakehouses, cowsheds, dairies, milkshops, factories, workshops, workplaces, outworkers' premises and places of entertainment, the fumigation of rooms, and the disinfection of clothing, etc., after cases of infectious diseases. It will be readily seen from the foregoing that the activities of the Department cover a wide field, which has been considerably extended in recent years by the development of public health legislation. We have endeavoured to keep pace with the demands made upon us, and have given attention to each branch of our work according to its importance. The total number of inspections made during the year was 18,032. In 1,010 houses and premises dealt with, nuisances to the number of 4,933 were discovered, and in dealing with the sanitary defects from which they arose 904 "preliminary" and 235 "statutory" notices were served.

The number of letters received and written with reference to the work of the department was 654. In order to efficiently supervise sanitary work in progress, 1,384 visits were paid.

The number of complaints received at the office numbered 508, as against 504 received last year. All these were duly investigated and dealt with as found necessary. Many of these were of the usual trivial character, and in a number of instances no nuisances could be discovered against which the complaint was made.

Every effort has been made to secure that the high standard of sanitation already reached in the borough shall be maintained, and from the following tables summarising the work carried out during the past five years it will be seen that great attention has been bestowed upon all conditions likely to affect the well-being of the inhabitants. The mere enumeration of defects remedied conveys a most inadequate impression of the work done by the sanitary staff, because in addition to the matters set out, a considerable amount of time is of necessity taken up in keeping various records and registers, in clerical work, in interviewing owners or agents of property, and other administrative work which cannot well be tabulated.

This report also contains several tables of the work done during the years 1921 to 1925 inclusive.

The total number of sanitary inspections of the district during 1921 to 1925, with the results, are fully set out in the appended table.

## Sanitary Inspections of Districts and Results for the Years 1921, 1922, 1923, 1924 and 1925.

	1921	1922	1923	1924	1925
Total number of Visits and Inspections ...	15970	19201	20485	16577	18032
Special Inspections... ..	1534	1228	2926	994	792
Inspections re Nuisances from rats ...	1351	1123	814	785	593
House-to-house Inspections ... ..	873	1057	779	1121	677
Inspections of Work in progress ... ..	2594	2962	2573	1214	3170
Interviews with Builders, etc. ... ..	634	702	722	711	786
Re-inspections ... ..	1517	2559	2481	2066	1986
Visits to Slaughter-houses ... ..	1221	2380	2876	2896	3182
"  " Food Shops ... ..	2608	2170	2683	2836	2241
"  " Houses-let-in-Lodgings ... ..	201	227	120	192	196
"  " Common Lodging Houses ... ..	233	297	529	305	284
"  " Cowsheds, Dairies and Milkshops	84	111	135	104	153
"  " Bakehouses ... ..	85	122	160	120	243
"  " Workshops and Outworkers ... ..	528	744	714	825	726
"  " Schools ... ..	64	61	95	94	65
" re Infectious Diseases ... ..	1178	1354	2046	1296	1284
"  " Public and Private Conveniences	215	198	288	270	413
" to Places where Animals are kept	1045	1835	525	686	1179
"  " Public Entertainments ... ..	26	71	64	62	62
Complaints received ... ..	479	368	560	504	508
Number of Nuisances reported ... ..	6197	5509	6499	5389	4933
"  " Houses and Premises dealt with	1107	873	1137	1157	1010
"  " Legal Notices served ... ..	214	202	432	276	235
"  " Preliminary Notices served ...	1256	955	1036	1035	904
"  " Letters written referring to Notices ... ..	591	362	346	211	654
DRAINS.					
Drains opened and examined under Sec. 41 P. H. Act, 1875 ... ..	108	83	82	51	102
Smoke tests applied to drains and soil pipes	217	162	173	106	154
Chemical tests applied to drains & soil pipes	27	10	21	28	15
Water tests applied to drains and soil pipes	361	416	468	318	313
Defective Brick Drains removed ... ..	27	44	24	16	28
New Drains laid ... ..	159	146	158	133	162
Lengths in yards of Stoneware Pipe Drains laid ... ..	2141	2452	1946	1502	1310
Lengths in yards of Heavy Cast Iron Pipes	749	902	1123	978	2477
Manholes and Inspection Chambers provided ... ..	92	121	113	108	115
Intercepting Traps fixed ... ..	103	112	80	73	94
Iron and Stoneware Gully Traps fixed ...	287	336	310	385	346
Dip and Bell Traps removed ... ..	22	16	60	20	26
Drains flushed ... ..	30	24	45	12	16



	1921	1922	1923	1924	1925
<b>WATER CLOSETS.</b>					
New Water Closets built ... ..	43	67	46	56	157
New W.C. Pans of the wash-down type fixed ... ..	202	165	247	186	246
Old Pan Containers and Long Hopper Closets removed ... ..	37	28	22	1	—
Flushing Boxes fixed to W.C.'s ... ..	84	90	44	96	172
Flushing Boxes repaired ... ..	80	96	70	87	65
Water Closets and Drains unstopped ... ..	81	108	78	83	132
Defective and dirty W.C. pans ... ..	210	106	14	60	94
<b>SOIL AND WASTE PIPES.</b>					
Soil and Ventilating Shafts fixed ... ..	116	132	88	79	130
New Waste Pipes fixed, trapped and disconnected... ..	386	131	329	246	573
<b>MISCELLANEOUS.</b>					
Rooms cleansed, limewashed and repaired	1245	2639	1966	1966	1437
House Roofs, Eaves Gutters and Rain- water pipes repaired ... ..	416	576	633	430	440
New Sinks and Lavatories provided ... ..	181	174	176	84	274
Yards and Areas asphalted or concreted ... ..	95	95	105	62	75
Ash Receptacles (moveable galvanised iron, with covers) ... ..	130	294	288	249	306
Bakehouses cleansed and limewashed ... ..	80	55	24	38	40
Slaughter-houses cleansed and limewashed	40	16	16	10	11
Common Lodging Houses cleansed and limewashed ... ..	14	14	14	14	14
Overcrowding in dwellings abated ... ..	5	23	8	7	29
Manure Receptacles built or re-constructed or repaired ... ..	5	4	10	4	5
Accumulations of manure removed ... ..	28	16	31	12	8
Nuisances from keeping animals ... ..	45	23	7	24	23
<b>INFECTIOUS DISEASES.</b>					
Inquiries into cases of Infectious Diseases	1178	1354	2046	1300	1284
Notices to School Masters and Mistresses with regard to Infectious Diseases...	35	75	55	26	27
Notices to Parents with regard to Infect- ious Diseases ... ..	35	75	55	26	27
Notices to Free Library with regard to Infectious Diseases ... ..	4	6	6	2	—
Articles of Clothing disinfected after In- fectious Diseases ... ..	4569	5217	4168	3609	3110
Rooms fumigated ... ..	189	208	292	226	191
Articles of clothing, etc., disinfected for outside Sanitary Authorities and Private Persons ... ..	559	671	416	515	676
Houses disinfected after Infectious Diseases	127	151	212	166	131

### House-to-House Inspection.

Following the practice, which was in vogue here for many years prior to the passing of the Housing and Town Planning Act, 1919, of systematically inspecting houses, we have made 615 systematic house-to-house inspections, during 1925.

This is in accordance with the requirements of the Housing (Inspection of District) Regulations, 1910.

The following tables give the number of houses inspected in the various streets of the town, the number of houses occupied, and the number which on inspection were found to be in a sanitary or insanitary condition. It will be seen that in the majority of houses examined they were found to have one or more defects in them.

In the 615 houses inspected no less than 3,128 defects were discovered.

The inspections revealed numerous structural defects, including damp house walls and floors: leaky roofs; defective eaves, spouting and rainwater pipes; walls and ceilings in bad state of repair and dirty; defective paving of yard, etc.

#### CENTRAL WARD.

Name of street.	No. of occupied houses in street.	No. of houses in which defects were found.	No. of houses without defects.	Total number of defects found.
Orchard Cottages, Swindon Road } Brunswick Street.....	4 75	Closing Order (2) 4 60	... 15	14 613
Totals .....	79	64	15	627

#### MIDDLE WARD.

Tivoli Street (Part).....	11	9	2	46
Casino Place.....	17	17	...	123
Tivoli Lane .....	6	4	2	6
Lypiatt Street .....	37	18	19	92
Hatherley Street.....	40	27	13	132
Princes Road.....	47	31	16	190
Dagmar Road ... ..	29	19	10	104
Alexandra Street .....	32	11	21	38
Albany Road.....	18	12	6	70
Oakfield Street.....	15	3	12	3
Totals .....	252	151	101	804

## EAST WARD.

Name of street.	No. of occupied houses in street.	No. of houses in which defects were found.	No of houses without defects.	Total number of defects found.
Keynsham Street.....	47	29	18	226
Sidney Street.....	35	30	5	209
Glenfall Street.....	31	23	8	211
Hewlett Place.....	13	11	2	101
All Saints' Road .....	37	23	14	161
Totals .....	163	116	47	908

## NORTH WARD.

St. Paul's Street N.....	30	12	18	16
Elm Place, Swindon Rd.	6	6	...	43
Carlton Place W. ....	7	7	...	46
Bubb's Cott's., High St.	3	3	...	20
Totals .....	46	28	18	125

## SOUTH WARD.

Victoria Place, Bath Rd.	21	19	2	110
Vernon Place, do.	7	6	1	49
Corpus Street .....	22	22	...	445
Totals .....	50	47	3	604

## WEST WARD.

Arle .....	25	17	8	60
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## Summary of House-to-House Inspections 1921 to 1925 inclusive.

WARD.				
North Ward.....	1056	788	268	4217
Middle Ward .....	637	407	230	2089
West Ward .....	275	129	146	467
South Ward .....	733	507	226	3385
East Ward .....	741	535	206	5241
Central Ward .....	256	217	39	1868
Totals .....	3698	2583	1115	17267

(a) Total	...	...	...	...	...	...	80
(b) As part of municipal housing scheme	...	...	...	...	...	...	44

1.	Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts) ...	1,469
2.	Number of dwelling houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910 ... ..	615
3.	Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ... ..	7
4.	Number of dwelling houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation ...	423

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers ... ..	416
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A.—Proceedings under Section 3 of the Housing, Town Planning, etc., Act, 1923	
1. Number of dwelling houses in respect of which notices were served requiring repairs ... ..	75
2. Number of dwelling houses which were rendered fit :—	
(a) by owners ... ..	56
(b) by Local Authority in default of owners ... ..	12
3. Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close ... ..	Nil

1.	Number of dwelling houses in respect of which notices were served requiring defects to be remedied	...	155
2.	Number of dwelling houses in which defects were remedied :—		
(a)	by owners	... ..	143
(b)	by Local Authority in default of owners	... ..	Nil



C.—Proceedings under Section 17 and 18 of the Housing,  
Town Planning, etc., Act, 1909.

1. Number of representations made with a view to the making of Closing Orders ... ..	7
2. Number of dwelling houses in respect of which Closing Orders were made ... ..	7
3. Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit ... ..	7
4. Number of dwelling houses in respect of which Demolition Orders were made ... ..	5
5. Number of dwelling houses demolished in pursuance of Demolition Orders ... ..	10

### House Drainage.

A large amount of work is always necessary if private house drains are to be kept in good order. A good deal of time has been devoted to the inspection and testing of drains. The Public Health Committee authorised me in 102 cases to open the ground and examine the drains under Section 41 Public Health Act, 1875, and in 98 instances they were found to be in such a defective condition as to render it necessary to call upon the owner to take them up and replace them with new drains of glazed stoneware or heavy cast-iron pipes.

The owners of 23 houses having failed to comply with the notices served upon them to rectify defective drains, estimates were obtained from builders and the work was done by the Corporation. An Order was made in each case, declaring the expenses of the sanitary work executed and amounting to £261 19s. 0d. to be Private Improvement Expenses chargeable on the premises, with interest at the rate of 5 per cent. per annum.

In addition to the work done under notice, a good deal has been done to obtain the Corporation Sanitary Certificate.

A survey has been made of every house and premises where the drains have been laid, and plans of such drains have been made and filed for future reference. These plans, of which we have now 1,792 form a valuable record of the drainage work done in connection with existing buildings.

## THE CORPORATION SANITARY CERTIFICATE.

The following table shows the houses for which the Corporation Sanitary Certificate was granted during the years 1921 to 1925, inclusive, to owners or tenants who made application for them.

The total number of Certificates issued since the commencement of this work is 1326. The inspections made in connection with this work frequently revealed grave defects in the drainage system and sanitary fittings of a house, when the owner or occupier was under the impression that everything was in perfect sanitary order.

The periodical testing of drains and sanitary fittings is strongly recommended as being the best means of protection against danger to health which may arise from defective sanitary conditions.

All who are about to take a house are strongly advised, before signing any agreement to insist upon an up-to-date inspection and a certificate of sanitary fitness of the premises.

### Sanitary Certificates Granted, 1921.

<i>Situation of Premises.</i>	<i>Gross Annual Value</i>
2, Lansdown Parade ... ..	£35
Foreland, The Park ... ..	70
25, Lansdown Place ... ..	75
Craigleith, Moorend Park Road ... ..	80
6, Lypiatt Terrace ... ..	55
Inglewood, Eldorado Road ... ..	80
6, Pittville Villas ... ..	45
Hartford House, Evesham Road ... ..	110
The Granleys, St. Mark's ... ..	200
Invertorre, Charlton Lane ... ..	33
Springfield Lawn, The Park ... ..	75
Keynsham Lodge, High Street ... ..	65
The Holt, Berkeley Street ... ..	45
Brooks Lodge, The Park... ..	70
Sunny Side, Western Road ... ..	38
Benton House, The Park ... ..	160
4, North Place ... ..	30
Eltham Lawn, Lansdown Road ... ..	120
1, Argyle Place ... ..	60
2, Raymond Terrace, London Road ... ..	30
Riversdale, Old Bath Road ... ..	35
12, Montpellier Grove ... ..	45
Locarno, Glencairn Park Road ... ..	50
Fernleigh, Lansdown Road ... ..	75
4, Keynsham Road ... ..	60
Thirlestine Villa, Bath Road ... ..	95
Chalfont, The Park ... ..	80

**1922.**

<i>Situation of Premises.</i>					<i>Gross Annual Value.</i>
331, High Street	...	...	.	...	£14
Priory Lodge, High Street	...	...	...	...	60
Montpellier House	...	...	...	...	95
Lake View, Pittville	...	...	...	...	95
Leeswood, Montpellier Drive	...	...	...	...	65
Lanesfield, Lansdown Road	...	...	...	...	100
Parkfield Lawn, St. Stephen's Road	...	...	...	...	75
1, Kilchberg Villas, St. Luke's	...	...	...	...	26
2, Clarence Square	...	...	...	...	32
5, Park Place	...	...	...	...	45
Cedarlea, Lansdown Road	...	...	...	...	100
Maryville, Tivoli Road	...	...	...	...	40
1, Somerset Villas	...	...	...	...	38
6, Montpellier Villas	...	...	...	...	22
Lansdown Court East	...	...	...	...	100
Rendcomb Lodge, Hewlett Street	...	...	...	...	27

**1923.**

1, Gainsborough Villas, College Road	...	...	...	...	38
Benton House, The Park	...	...	...	...	160
Rayrigg House, Bath Road	...	...	...	...	80
29, Promenade	...	...	...	...	80
Halsey House, Pittville	...	...	...	...	85
15, Lansdown Place	...	...	...	...	80
Cleeve View, Harp Hill	...	...	...	...	35
Raglan, Eldorado Crescent	...	...	...	...	50
5, Clarendon Villas, Pittville	...	...	...	...	70
14, Lypiatt Terrace	...	...	...	...	70
2, Derby Villas, Doura Road	...	...	...	...	72
Carlton Lodge, Carlton Street	...	...	...	...	22
Langstone, Montpellier Drive	...	...	...	...	65
Lansdown Court West	...	...	...	...	85
Southwood, Lypiatt Road	...	...	...	...	200
Ash Priors, Pittville Circus	...	...	...	...	120
Hawthornden, Montpellier Terrace	...	...	...	...	70
6, Queen's Villas, Queen's Road	...	...	...	...	60
Lewisham House, Suffolk Road	...	...	...	...	60

**1924.**

Fulshaw Lodge, Christ Church Road	...	...	...	...	125
2, Argyle Villas	...	...	...	...	70
The Abbots, All Saints' Road	...	...	...	...	100
Chaddesley, St. George's Road	...	...	...	...	45
Strathdurn, Pittville Circus	...	...	...	...	85
8, Hatherley Place	...	...	...	...	30

**1924**—*continued.*

<i>Situation of Premises.</i>				<i>Gross Annual Value.</i>
Overdale, Painswick Road	...	...	...	£65
New Court, Lansdown Road	...	...	...	250
Kennedy Lodge, Keynsham Road	...	...	...	40
Evesham Lodge, Prestbury Road	...	...	...	60
The Beeches, Suffolk Square	...	...	...	105
Polefield, Lansdown Road	...	...	...	200
Limehurst, Painswick Road	...	...	...	50
5, Bayshill Terrace	...	...	...	55
13, Royal Crescent	...	...	...	60
Andover Lodge, Park Place	...	...	...	50
Fernleigh, Lansdown Road	...	...	...	75
Bramery Cottage, London Road	...	...	...	30
Linden House, College Lawn	...	...	...	105
Oakley, The Park	...	...	...	165
9, Montpellier Grove	...	...	...	50

**1925.**

Malden Court, Pittville	...	...	...	110
Southwood, Lypiatt Road	...	...	...	200
Elm Lodge, Lansdown	...	...	...	100
Dunedin, Western Road	...	...	...	40
Melrose House Hotel, The Park	...	...	...	80
10, Montpellier Terrace	...	...	...	38
Pailton, Queen's Road	...	...	...	105
3, Douro Villas, Douro Road	...	...	...	85
Baumont, Shurdington Road	...	...	...	85
Wood Green, Christ Church Road	...	...	...	65
Clarefield, Evesham Road	...	...	...	85
The Limes, Painswick Road	...	...	...	38
Ingleside, Queen's Road	...	...	...	75
Preston, Old Bath Road	...	...	...	50
Carlton, Pittville Circus Road	...	...	...	75
Montgomery, Eldorado Road	...	...	...	65
1, Lansdown Parade	...	...	...	50
Claremont, Belmont Road	...	...	...	45
Malvern View, Gloucester Road	...	...	...	24



## Report on the Administration of the Factory and Workshops Act, 1901, in connection with Factories, Workshops and Homework.

The whole of the workshops (including bakehouses, workplaces and outworkers' premises) have been visited during the year. The Local Authority is responsible for the sanitary condition of these places.

Sanitary conditions include :—

- (a) Cleanliness,
- (b) Overcrowding,
- (c) Ventilation,
- (d) Drainage of floors of workshops in which any process is carried on which renders the floor liable to be wet and which is capable of being removed by drainage, and
- (e) Sanitary convenience.

The special Tables of the Home Office are here appended, giving information with regard to Workshops, Workplaces and Homework :—

### 1.—INSPECTION.

Premises.	Number of Inspections.	No. of Written and Verbal Notices.	Number of Prosecutions.
Factories (including Factory Laundries) ... ..	28	3	Nil
Workshops (including Workshop Laundries) ... ..	560	35	Nil
Workplaces (other than Outworkers' premises included in Part 3 of this Report ... ..)	30	4	Nil
Total ... ..	618	42	Nil

### 2.—DEFECTS FOUND.

Particulars.	Number of Defects found	No. of Defects remedied.
Nuisance under the Public Health Acts :		
Want of Cleanliness ... ..	146	140
Want of Ventilation ... ..	Nil	Nil
Overcrowding ... ..	Nil	Nil
Other Nuisances ... ..	34	30
Sanitary accommodation { Insufficient ... ..	1	Nil
{ Unsuitable or Defective ... ..	Nil	Nil
{ Not separate for sexes ... ..	Nil	Nil
Total ... ..	181	171

## 3.—HOME WORK.

Lists received from Employers.

Nature of Work.	Once in the year.		Twice in the year.	
	Lists.	Outworkers.	Lists.	Outworkers.
Making and altering wearing apparel ... ..	2	11	8	59
Number of Outworkers ... ..		70		
Number of Inspections of same ...		108		

## 4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.—(1).	Number.—(2).
Dressmakers ... ..	34
Tailors ... ..	44
Laundries ... ..	44
Bootmakers ... ..	46
Milliners ... ..	18
Bakehouses ... ..	40
Miscellaneous ... ..	131
Total number of Workshops on Register ... ..	357

## 5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories ... ..	Nil
Failure to affix Abstract of the Factory and Workshop Act (s. 101) ... ..	Nil
Notified by H.M. Inspector of Factories ... ..	5
Reports (of action taken) sent to H.M. Inspector ... ..	5
Underground Bakehouses (s. 101) ... ..	9
Certificates granted during the year ... ..	Nil
In use at the end of the year ... ..	6

## MEAT INSPECTION.

The following Tables show the number of animal carcasses, with their organs, inspected at the Abattoir and private slaughter-houses during 1925.

Species.	Abattoir.	Private slaughter-houses.
Heifers ... ..	218	562
Bullocks ... ..	50	81
Cows ... ..	32	36
Calves ... ..	1473	873
Sheep ... ..	2898	4643
Pigs ... ..	3225	2077
Total ... ..	7896	8272

From the above Table it will be seen that 16,168 animals have been slaughtered in the Borough, and the whole of the carcasses with their viscera, were examined before they were removed from the slaughter-houses. The instructions laid down for the guidance of meat inspectors in Memo. 62—Foods, have been closely followed. The lymph glands of the head and throat (retro-pharyngeal and submaxillary) of all bovines and pigs have been examined. The tongues of all bovines were loosened and dropped so that the glands could be more easily incised and examined.

Table showing number of animals affected with Tuberculosis :—

Species.	No. Slaughtered.	Found Tuberculous.	Percentage.
Cows ... ..	68	2	2·94
Heifers ... ..	780	3	0·038
Bullocks ... ..	131	Nil	Nil
Calves ... ..	2436	1	0·0426
Pigs ... ..	5302	99	1·867
Total ... ..	8627	105	1·206

Of the 8,627 bovines and porcines slaughtered in the district, 104 or 1·20 per cent. showed tubercular lesions.

In carrying out the work of meat inspection 3,182 visits have been paid to the Abattoir and 11 private slaughter-houses, most of them in the early morning or late in the evening.

In addition to the foregoing, special attention has been given to the inspection of imported meat at the Cold Stores and wholesale meat shops. The average weekly sales at these places reach 600 quarters of beef, 1,200 sheep and lambs, also a large number of livers, hearts, kidneys, tripe, etc.

Number of Diseased Carcases seized or surrendered :—

2 Cows	...	Generalised Tuberculosis.
1 Heifer	..	" "
1 Cow	...	Extensive and severe bruising.
1 Hindquarter of Cow	...	Bruising due to fractured leg.
1 Forequarter of Cow	...	Bruised.
2 Sheep	...	Liver Disease and Dropsy.
1 "	...	Emaciation.
1 "	...	Anaemic and Dropsical.
3 "	...	Pyemia.
2 Forequarters	...	Pleurisy.
1 Calf	...	Pyemia.
1 "	...	Asphyxia.
5 Pigs	...	Dropsical.
2 "	...	Pleurisy and Peritonitis.
3 "	...	Emaciation and Dropsical.
1 "	...	Jaundice.
1 "	...	Swine Erysipelas.
12 "	...	Generalised Tuberculosis.
1 "	...	Liver Disease and Dropsy.

In addition to the foregoing, 953 livers, lungs, or other internal organs of animals which were on examination found to be locally diseased were surrendered for destruction.

**Unsound Food :—**

2 qrs. of Beef	...	Bone Taint
5 pieces of Salt Beef	...	Decomposition.
1 Loin of Beef	...	"
48 pieces of Beef	...	Bruised.
6 Sheep	...	Unsound.
2 Legs of Mutton	...	"
79 Ox Kidneys	...	"
6 Ox Livers	...	"
5 Ox Tongues	...	"
135 lbs. Tripe	...	"
11 Ducks	...	"
16 Tins of Corned Beef	...	"
48 Tins of Fruit	...	"
80 Jars of Jam	...	"
33 Tins of Fish	...	"
12 Tins of Meat	...	"
750 Pears	...	"
1 Box of Prunes	...	"
3 cwt. of Fish	...	"

The total weight of diseased and unsound meat, fish and other foods destroyed was 6 tons, 15 cwt., 1 qr., 13 lbs.



Table showing the number of animal carcasses inspected during the years 1921 to 1925, inclusive :—

	Beeves.	Calves.	Sheep.	Pigs.
1921	899	2319	5534	3437
1922	1216	2179	7725	4784
1923	822	2846	7322	5199
1924	995	2371	7322	5860
1925	979	2346	7541	5302
Total ...	4911	12061	35514	24582

During this period 2,882 livers, lungs or other internal organs of animals which were, on examination, found to be locally diseased, were surrendered.

The total weight of meat, fish and unsound food surrendered was 37 tons, 15 cwt., 1 qr.

### Management of Abattoir.

There is a Superintendent of the Abattoir—a butcher by trade—who is responsible for the maintenance of order, for the due cleansing of the slaughter-houses, for keeping account books and to see that the bye-laws regulating the place are complied with.

The examination of the meat is done by the Chief Sanitary Inspector and one of his Assistants.

The abattoir is open for slaughtering at the following times, viz.: Monday 8 a.m. to 7 p.m.; Tuesday 7 a.m. to 8 p.m.; Wednesday and Thursday 7 a.m. to 7 p.m.; Friday 7 a.m. to 6 p.m.; Saturday 7 a.m. to 12 noon, and on such occasions as may be necessary to remain open longer to meet the requirements of the trade.

The following is the scale of charges now in force :—Beeves 1/6; Calves 9d.; Sheep 4½d.; Pigs 9d. and 1/1½.

Tabular statement of the number of private slaughter-houses in use at the dates metioned :—

	In 1920.	In January 1925	In December 1925.
Registered ...	17	11	11
Licensed ...	Nil	Nil	Nil
Total ...	17	11	11

## Public Health (Meat) Regulations, 1924.

In accordance with the instructions of the Public Health Committee, inspections were made of all slaughter-houses and shops where meat is prepared or sold for the food of man, to ascertain if they complied with the new Regulations.

**SLAUGHTER-HOUSES:—**There are now 11 Private (Registered) Slaughter-houses in use in the borough. The bye-laws for limewashing and cleansing of these private places and the removal of offal, etc., are well complied with, but the sanitary condition of private slaughter-houses is greatly inferior to that of the apartments of the Public Abattoir. At the present time there are no special structural defects requiring attention at these places.

**SLAUGHTERING:—**The Regulations require butchers to give notice of their intention to slaughter. Ten butchers gave proper notice that they would slaughter on fixed days and at fixed times. If a butcher slaughters outside the fixed hours he gives the requisite notice. One butcher gives notice each time he is going to slaughter. I may add that this has been the practice here for the last three years.

Slaughtering takes place in private slaughter-houses from Monday to Saturday; from 7 a.m. to 7 p.m. on Monday, Wednesday, Thursday and Friday. From 7 a.m. to 8 p.m. on Tuesday and 2 to 6 p.m. on Saturday.

**MEAT MARKING:—**At a large and representative meeting of the butchers, which I attended to explain the Meat Regulations, it was agreed that, for various reasons, it was unnecessary to introduce such a practice in Cheltenham:

**STALLS:—**There are no meat stalls in this town.

**SHOPS AND STORES:—**The number of shops selling bacon, ham or cooked meat is 96. The number of butchers' shops is 66. All these were inspected, when the undermentioned contraventions of the Regulations were noted. Notices were given to the tradesmen to rectify these defects.

## Contravention of Meat Regulations.

### General Cleanliness.

Want of cleanliness re floors and implements, etc. ...	...	...	8
Dirty w.c. apartments and w.c. pans... ..	...	...	14
Accumulations of stinking meat wrappers improperly stored	...	...	5

### Defects and Cleansing.

Dirty walls and ceilings of preparing or storage rooms	...	...	25
Defective drains and w.c.'s	...	...	8
Defective floors	...	...	14

**Structural Defects.**

W.C. Apartment in communication with meat store-room	...	8
Imperfect grating ventilation allowing contamination of meat in store-room from footpath traffic	... ..	9
Unsuitable and improper places where meat was stored along-side of house refuse, coal and coke	... ..	9
Insufficient or imperfect ventilation to meat store	... ..	10
Cellar or store-room with unceiled ceiling joist which admits of dust, etc., from above filtering through on meat	... ..	4

**Receptacles for Trimmings.**

Bones stored in uncovered boxes or baskets	... ..	73
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SHOP WINDOWS:—The Regulations require the occupier of a shop “to take all such steps as may be reasonably necessary to guard against the contamination of meat therein by flies, and shall cause the meat to be so placed as to prevent mud, filth or other contaminating substances being blown thereon.”

The 96 shops at which bacon, ham or cooked meats is sold, all had windows. The lower half of several of these are sash windows, which are used for dressing the window. All these are now kept closed.

On inspecting the 66 butchers shops it was found that :

- 29 had Plate Glass Windows
- 24 had Glass Shutters
- 4 had sliding Sash Windows, and
- 9 had Open Fronts.

It was at this time the practice to take down the glass shutters and open the sliding windows during business hours, so that 37 shops had open fronts. At the Butchers' Association meeting already referred to, I informed the members of the trade, that the Medical Officer of Health and myself were of opinion that to comply with the Regulations, the meat should be protected by means of glass windows.

It is very gratifying to be able to report that, on the whole, the butchers have complied with the Regulation requiring them to protect their meat from contamination.

Since last May, 15 shops have been provided with plate glass windows, so that 44 shops have now permanently fixed windows. Of the remaining 22 several have promised to have new fronts put in at an early date, but in the meantime the glass shutters are kept up whilst meat is on sale.

Some of our butchers who have put in new shop fronts are very pleased with the results, they say the meat looks better, and that it is a profitable investment as meat protected by a window is prevented from drying so much and diminishing in weight.

TRANSPORT AND HANDLING :—This Section deals with transport and handling of meat and makes it compulsory to exercise greater care and cleanliness than has hitherto been the practice. At the meeting of butchers I submitted the following nine points as being necessary to secure the standard of cleanliness required under this heading.

1. Carts and vans used for the removal of meat must be thoroughly cleansed after use.

2. When used for the conveyance of meat, the floor of the vehicle must be covered with some suitable washable material, preferably white or gray in colour.

3. A clean cloth must be used to protect the meat from coming into contact with the sides of the cart or van, and also to cover the top of the consignment.

4. The surface of the meat should not come into direct contact with any tarpaulin, and tarpaulins should be kept in as cleanly a state as possible.

5. No driver should be allowed to sit on the consignment of meat even if the meat is adequately covered.

6. In handling and transport no part of the meat must come in contact with the ground

7. Every person while engaged in carrying meat should wear a clean and washable head covering and overall.

8. Wet offal should be conveyed in an impervious watertight receptacle to prevent soiling of the meat by the moisture exuding from the offal.

9. Notices should be exhibited in shops urging customers not to handle meat before purchase.

These were unanimously agreed to by the members of the trade.

### **Inspection of Food Shops.**

The various butchers', fishmongers' and greengrocers' shops, and other places where food is prepared or sold were frequently inspected during the year, altogether some 2,241 visits were paid to these places. A special inspection was made during the year, of all the tinned foods in stock at the various shops in the town. Several lots of unsound meat, fish and fruit were submitted for inspection, in each case the articles were carefully examined and sorted if it were necessary, the unsound or unwholesome food being in all cases voluntarily surrendered by the tradesmen for destruction.



The following table gives the number of shops devoted to the preparation or sale of food in the borough:—

Bakers	...	...	...	...	...	...	55
Butchers	...	...	...	...	...	...	66
Confectioners and Sweet shops	...	...	...	...	...	...	110
Dairies and Milk Shops	...	...	...	...	...	...	66
Fish and Chip Potato shops	...	...	...	...	...	...	24
Fish Dealers	...	...	...	...	...	...	26
Greengrocers	...	...	...	...	...	...	178
Grocers	...	...	...	...	...	...	160
Restaurants and Tea shops	...	...	...	...	...	...	40

### **Cowsheds, Dairies and Milkshops.**

There are 66 milkshops and 16 dairy farms within the borough, and to these, 153 visits have been paid to see that the Orders and Regulations relating to this trade were being observed.

During the year 2 applications were received from persons desirous of commencing the trade of milk-seller. The applicants' premises were found, on inspection, to be suitable, and the Public Health Committee decided to register them.

### **Rat Destruction.**

This work has been systematically and persistently carried on throughout the town during the whole twelve months.

During the year eighty-five complaints have been received of rats infesting houses, shops or warehouse property. All complaints were promptly attended to, and where possible the rats were traced to their source and destroyed.

Every assistance and advice has been given to householders and others to clear their premises of the pest.

INSPECTION OF SEWERS.—One of the most useful pieces of work done during the last two years has been a systematic inspection of the main sewer in High Street. This sewer, which is large enough for a man to walk up, was thoroughly examined from the Gas Works to Corpus Street, by men from the Borough Surveyor's Department, when 63 disused brick barrel drains and 35 pipe drains were found. In addition to these, 106 private house drain connections were found to be defective. All the foregoing, which were so faulty that rats could get through them into adjacent property, have been effectually stopped with concrete so as to make this portion of the sewer rat-proof.

SUBSIDENCES OF ROADS.—During the year there were 32 subsidences of roads and footpaths due to rats working their way out through defective drains and sewers. The cost of repairing damage done to roads, sewers, water mains and services, buildings, etc., has run into a sum of approximately £320.

**REPRESSIVE METHODS.**—The methods employed to eliminate rats have been trapping, hunting, gassing and poisoning. During the year 42,000 baits have been laid in sewer manholes, by the men engaged flushing sewers. It is estimated that some 6,500 rats have been destroyed.

**NATIONAL RAT WEEK.**—During the National Rat Week an endeavour was made to stimulate and encourage the public to take an interest in the work of rat extinction by propaganda work. I had some slides specially made for informing those who were troubled with rats or mice, as to the best means of getting rid of the nuisance. These slides were exhibited by the kindness of the proprietors of the four local Picture Houses—free of charge—for the week.

Special attention was given to getting rid of rats at the Refuse Destructor, Sewage Disposal Works and Sewage Farms, by trapping, poisoning and gassing.

Over 3,000 baits were put down in the sewers and at the Refuse Destructor, etc.

Occupiers of premises that had been infested, or that are peculiarly liable to infestation by reason of the business carried on, were visited and enquiries made as to whether they were troubled with rats.

Advertisements taking the form of short articles, of an informative character as to the rat pest, were inserted in the local evening paper, impressing upon owners and occupiers of premises the necessity of taking concerted action for the destruction of rats.

Altogether some 583 inspections and re-inspections of infested premises have been made during the year. The cost of poison, bread and other materials for making baits for the year amounts to £10 4s. 5d. and this includes expenses incurred during National Rat Week.

### **Houses-Let-In-Lodgings.**

These are houses which the owners let out in rooms—mainly furnished—to different families, and in a number of cases excessive rents are charged for them. The houses are periodically inspected to see that the bye-laws regulating these places are observed.

Houses on Register	...	...	...	...	27
Number of rooms ...	...	...	...	...	118
Number of occupants	...	...	...	...	260
Inspections made ...	...	...	...	...	196
Notices served ...	...	...	...	...	45
Notices complied with	...	...	...	...	44

### Common Lodging Houses.

The number of Common Lodging Houses now on the Register is eight. The houses with their accommodation are as follows:—

20 and 21, Stanhope Street ... ..	21 Lodgers.
40, Stanhope Street ... ..	10 „
Cumberland Cottage, Grove Street ...	20 „
Cumberland Villa „ „ ...	21 „
Rowton House „ „ ...	46 „
Shamrock Inn „ „ ...	12 „
2 and 4, Grove Street ... ..	28 „
221, High Street ... ..	30 „

During the years 1921 to 1925, 1,648 visits of inspection were paid to these places, and it was found that on the whole they were well conducted, the bye-laws and regulations being carefully carried out so as to leave little room for complaint.

### Offensive Trades.

The offensive trades carried on in this town are fortunately few in number. The trades in operation here, which are in the statutory list of offensive trades, are three fellmongers, one tallow-melter, and 18 rag and bone dealers. The bye-laws regulating these places, have generally been well observed, although it has been necessary to occasionally call attention to the desirability of removing garbage, etc., more regularly, and for the thorough cleansing of the floors and pavements at the close of each working day.

### Sanitary Condition of Places of Entertainments.

The whole of the theatres, music halls, cinemas, and other places of entertainment in the borough have been periodically visited and with three exceptions they were found to be in a satisfactory condition. The three places which were not satisfactory were reported to the Public Health Committee who gave instructions for notices to be served upon the occupiers to remedy the insanitary conditions.

Notices were subsequently served specifying in detail the work necessary to be done to make the premises sanitary. These notices were promptly complied with.

### Increase of Rent and Mortgage Interest (Restrictions) Act, 1923.

Four applications were received for a certificate that the house was not in all respects reasonably fit for human habitation. One certificate was issued and three refused. Action was taken in the three last cases under the Housing and Town Planning Acts to have the houses put into satisfactory condition.

A. E. HUDSON, M.B.E.,  
CHIEF SANITARY INSPECTOR.





# APPENDIX.

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## Summaries of Meteorology of Cheltenham

Contributed by

JOHN ORGEE, D.S.C., F.R. Met. S. Lt.-Commander R.N.

Borough Meteorologist.

# THE METEOROLOGY OF CHELTENHAM.

Abstract of Meteorological Observations 1915—1925, taken by Mr. A. C. Saxby and Lt.-Commr. J. Orgee, D.S.C.,  
F.R. Met. Soc.

Latitude 51° 53' 45" N. Longitude 2° 03' 21" W.

1915—1925. Month.	Barometer corrected and reduced to M. S. L. 9 a.m. & p.m.	AIR TEMPERATURES.						Rainfall.		Bright Sunshine.	
		MEANS OF						Total Fall ins.	Rainy Days No.	Total hours.	Sunless Days No.
		Dry Bulb 9 a.m. & p.m.	Humidity per cent.	Max.	Min.	Mean.	Daily Range.				
		°		°	°	°	°				
January .....	29.988	41.5	83	46.5	36.6	41.5	9.9	2.53	15	45.2	13
February .....	29.945	40.1	82	45.4	35.7	40.6	9.7	2.43	13	65.9	8
March .....	29.936	42.0	80	48.4	36.2	42.3	12.2	1.87	14	106.5	5
April .....	29.859	45.8	78	53.6	39.0	46.3	14.6	1.93	13	150.4	2
May .....	29.961	54.8	76	63.7	46.4	55.0	17.3	2.19	12	205.7	2
June.....	30.077	58.6	74	68.1	50.2	59.2	17.9	1.12	8	198.8	1
July .....	29.977	61.5	74	70.1	53.6	61.8	16.5	2.54	12	186.3	2
August .....	29.941	60.3	77	68.5	53.1	60.8	15.4	2.64	14	150.9	2
September ...	29.962	56.0	81	64.3	49.2	56.8	15.1	2.28	11	143.1	2
October .....	29.947	51.1	81	57.0	44.1	50.7	13.2	2.56	15	112.6	5
November ...	29.921	43.0	83	47.4	36.9	42.2	10.5	1.55	11	71.7	8
December ...	29.913	41.4	84	45.8	36.3	41.0	9.5	2.51	16	40.7	13
Means .....	29.952	49.7	79	56.6	43.1	49.8	13.5	2.18	13	123.15	5
Column .....	1	2	3	4	5	6	7	8	9	10	11

# COMPARATIVE TABLE OF THE METEOROLOGY OF CHELTENHAM FOR THE YEARS 1878-1925.

*A division has been made in the returns comprising this table, keeping separate the years previous to 1903, when the instruments were removed to Montpellier Gardens, this position being more central and giving more accurate observations of Cheltenham than formerly.*

Year.	Air Pressure.	MEAN AIR TEMPERATURES				Humidity.		Rainfall		Bright Sunshine.
	Sea Level.	Max.	Min.	Mean	Range	9a.m.	9p.m.	Inches.	Days.	Hours.
	INCHES.	°	°	°	°	%	%			
1878	29.913	56.1	41.5	48.8	14.6	83	88	33.18	176	Previous to 1908, Sunshine recorded by a Jordan Twin Cylinder Recorder.
1879	29.944	52.2	38.5	45.3	13.7	87	89	32.63	212	
1880	29.971	55.8	40.5	48.1	15.3	85	88	33.72	177	
1881	29.957	55.0	38.9	46.9	16.1	82	85	25.28	185	
1882	29.914	55.9	41.5	48.7	14.4	81	86	37.92	214	
1883	29.964	55.6	40.6	48.1	15.0	85	89	29.93	204	
1884	29.978	56.8	41.9	49.3	14.9	84	89	24.04	190	
1885	29.930	54.8	40.0	47.4	14.8	84	87	26.45	193	
1886	29.912	55.0	40.6	47.8	14.4	83	86	32.55	193	
1887	30.029	55.3	38.6	46.9	16.7	80	83	22.78	153	
1888	29.959	53.8	40.1	46.9	13.7	82	84	28.85	195	
1889	29.971	55.4	40.6	48.0	14.8	84	87	27.07	181	
1890	29.959	55.6	40.1	47.8	15.5	84	88	20.09	191	
1891	29.957	55.1	40.0	47.5	15.1	83	87	33.14	192	
1892	29.948	54.6	38.7	46.6	15.9	82	85	19.45	175	
1893	29.990	59.1	41.3	50.2	17.8	81	83	19.91	169	
1894	29.963	56.2	41.6	48.9	14.6	83	87	29.12	194	
1895	29.923	56.2	39.6	47.9	16.6	83	87	24.99	174	
1896	30.030	57.0	41.4	49.2	15.6	83	86	21.54	185	
1897	29.969	56.8	42.8	49.8	14.0	82	86	26.23	191	
1898	30.009	58.2	42.5	50.3	15.7	82	85	24.23	173	
1899	29.989	58.5	41.2	49.8	17.3	81	85	25.72	162	
1900	29.928	57.3	41.1	49.2	16.2	80	84	28.44	203	
1901	29.966	56.2	40.1	48.1	16.1	79	83	23.27	169	
1902	29.906	56.9	42.4	49.6	14.5	84	87	22.53	176	
<b>Means</b>	<b>29.959</b>	<b>55.9</b>	<b>40.6</b>	<b>48.2</b>	<b>15.3</b>	<b>82</b>	<b>86</b>	<b>26.92</b>	<b>185</b>	
1903	29.883	55.8	43.0	49.4	12.8	82	84	35.7	215	1500.6
1904	29.988	55.7	42.8	49.2	12.9	80	84	22.4	177	1603.2
1905	30.005	55.7	42.9	49.3	12.8	79	83	23.8	165	1514.8
1906	29.985	56.8	43.4	50.1	13.4	78	82	24.5	164	1626.9
1907	29.966	55.4	43.1	49.2	12.3	80	85	29.0	174	1575.2
1908	29.803	56.8	41.9	49.3	14.9	81	84	20.2	158	1591.0
1909	29.956	55.1	41.7	49.3	13.4	82	84	27.9	191	1633.0
1910	29.968	55.6	43.0	52.6	12.6	85	87	31.3	175	1431.0
1911	29.780	59.3	43.9	50.6	15.4	81	83	22.3	145	1746.0
1912	29.955	56.5	43.3	49.8	13.5	82	88	29.5	190	1270.8
1913	29.974	57.1	44.1	50.6	13.0	82	86	26.7	158	1270.0
1914	29.962	69.1	32.7	50.9	17.4	86	87	27.4	167	1576.0
1915	29.934	56.4	41.7	49.0	14.7	80	85	32.8	154	1560.6
1916	29.867	56.9	43.3	50.1	13.6	79	81	27.3	164	1298.8
1917	30.011	55.2	41.8	48.5	13.4	78		22.60	136	1278.7
1918	29.990	57.7	44.2	50.9	13.5	75		22.05	130	1457.7
1919	29.958	55.2	41.7	48.5	13.5	80		27.27	137	1540.7
1920	29.982	57.1	44.1	50.6	13.0	84		27.12	161	1267.2
1921	30.080	60.0	44.4	52.2	15.6	82		15.59	118	1718.0
1922	29.980	55.5	42.1	48.8	13.1	78	80	26.88	175	1478.7
1923	29.891	56.1	43.1	49.6	13.0	77	80	27.30	193	1363.2
1924	29.898	55.8	43.7	49.7	12.1	76	79	35.61	176	1341.9
1925	29.940	56.6	43.4	50.0	13.2	76	79	23.34	172	1570.3
<b>Means</b>	<b>29.946</b>	<b>57.0</b>	<b>42.6</b>	<b>49.9</b>	<b>13.6</b>	<b>80</b>	<b>83</b>	<b>25.80</b>	<b>165</b>	<b>1487.6</b>

## NOTES ON THE TABLES.

COLUMN 1 is the mean reading of the Barometer at 9 a.m. and p.m., corrected for various errors and reduced to mean sea level. The instrument (a Fortin mercurial) is kept indoors, and the height of its cistern carefully recorded.

COLUMN 2 is the mean of the Dry Bulb readings in the screen, both at 9 a.m. and 9 p.m. It actually records the temperature in the screen (shade) at those hours. The reading in conjunction with the Wet Bulb give us the relative degree of Humidity. These Bulbs are more generally called the Hygrometer.

COLUMN 3 shows the relative humidity, a term used to express the percentage of saturation of the atmosphere with aqueous vapour, saturation point = 100.

COLUMN 4 AND 5.—The maximum and minimum thermometers are set at 2.100 (9 p.m.) readings up to that hour are entered to that day, the instruments record the actual maximum and minimum temperatures during the 24 hours.

COLUMN 6 Shows the mean temperature i.e.,  $\frac{1}{2}$  (max. and min.).

COLUMN 7 shows the daily range of temperature, a day being 24 hours, it is really the difference between the maximum and minimum temperatures.

COLUMN 8.—Rainfall is taken at 5 p.m. G.M.T. and 9 p.m. next morning and total entered to the day of 5 p.m. reading. The gauge is of the approved type, a Snowdon, which is 5 inches in diameter and has its rim twelve inches above the ground. A Rainy Day is one on which more than .005 of an inch of rain has fallen.

COLUMN 10.—The amount of bright sunshine is registered by an improved type of Campbell Stokes Recorder, which is mounted on Pittville Dome, at a height of 66 feet above the ground. This type of Recorder is the only one recognised by the Meteorological Office.

COLUMN 11.—This shows the number of days per month when no sun is registered, that is less than 3 mins. on the card, it must be remembered that sun may often be seen shining, but without sufficient strength to register, hence the term "bright sunshine."



## General Summary of Meteorology in Cheltenham during last 11 years 1915-1925.

1915. A cool year. Wet January, February, July, August and December, otherwise generally dry. Very little snow and frost. Great prevalence of East and North-East winds in Spring. Bright Sunshine above normal owing to an abundance in May and June.

1916. A dull year. Air pressure generally below normal being highest in January and February and lowest during November. The temperature for the year normal although January was unusually warm. Rainfall slightly above normal, with a wet February and October. Bright Sunshine deficient all round being 200 hours below average.

1917. A cold year on the average. The outstanding feature of the year was the prolonged cold in the early months; it was also notable for sharp showers of rain in June, for a wet August, a windy October and a cold December. May, June and July were the most sunny months of a year which produced deficiency in sunshine, curiously November put up a record for that month, i.e., 115 hours.

1918. A warmer year on the average. Mean temperature of the year above normal. Rainfall below average, although it was very heavy in August. Bright Sunshine slightly below normal, March, May, June and July were quite sunny whilst August and October were very deficient. Thunderstorms occurred in May and June.

1919. A rather cold year. Temperature was below normal during the first 4 months of the year, also July was 3° below normal. Rainfall practically normal, the heaviest falls being in January, March, July and December. Bright Sunshine above normal, good records being obtained in May, June, August and September, with October making a record for that month, i.e., 164 hours.

1920. A warmer year but dull. Temperature above normal practically the whole year, June being the warmest month usurping July, as it does occasionally. Rainfall an inch above normal, the wettest months being January, April and July. Bright Sunshine the lowest on record, January, February and October being the only months above normal, July failing very badly.

1921. A warm and abnormally dry year, with sunshine abundant. Temperature, May and August were normal, all other months above. Although one of our very warmest years no records were made, the highest day temperature was 90° F. on 10th July. Rainfall the lowest known in Cheltenham, Bright Sunshine the next to highest on record and 230 hours above normal, yet not a single month put up a record, but there was not a deficient month during the whole year.

1922. A cool year. The year was characterised by the continued low temperature from June to November. Other conspicuous features were the cold April, the hot spell in May and the high pressure of November. Sunshine and rain were about normal. Warmest day May 23rd. Coldest day February 5th.

1923. A dull and wet year. The most interesting features of the year were:—the hot period in July; the rainfall, it being the wettest year since 1915; the low temperatures of May and November, the absence of easterly winds and the prevalence of westerly winds in the Autumn. Bright Sunshine below normal. Warmest day July 12th 93° F. which equals record. Coldest day November 24th.

1924. A dull and very wet year, with a cool and cloudy Summer. The outstanding meteorological features of the year 1924 were the cold spell during the last three weeks of February and the first week of March, the brief spell of warm weather at Easter and some warm days in the latter half of June and middle of July, the wet cool summer with its unusual number of thunderstorms, accompanied in most instances by heavy falls of rain causing records to be constituted, such as May 19th when 1.4 inches fell in 1 hour, Chelt in flood and sewers surcharged, water in cellars, etc. Rainfall month of May 7.06 inches is the highest on record. Bright Sunshine below normal. Warmest day July 12th 84°. Coldest day January 9th 35°.

1925. A normal year. A sunny and abnormally dry June, a wet May; Wintry conditions—November and December.

The outstanding features of 1925 was the drought and brilliant weather of June and the cold spell which lasted with little intermission from November 8th to December, 26th. With the exception of June the Summer was a disappointing one. Other noteworthy features were the two short hot spells in July between the 11th and 14th and between the 21st and 25th, the dryness of March and the wet weather of February and September. Bright Sunshine nearly 100 hours above normal. Rainfall of June 0.04 inches constitutes a record, being the lowest fall known in Cheltenham.



